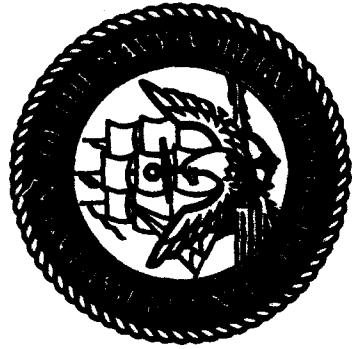


AD-A246 840

**DEPARTMENT OF THE NAVY
AMENDED FY 1992/FY 1993 BIENNIAL BUDGET ESTIMATES**



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ELECTE
M A R 5 1992
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**JUSTIFICATION OF ESTIMATES
SUBMITTED TO CONGRESS JANUARY 1992**

AIRCRAFT PROCUREMENT, NAVY

DEFENSE TECHNICAL INFORMATION CENTER

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DISCUSSION OF THE SUBJECT

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Distribution Unlimited

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Department of the Navy
 Aircraft Procurement, Navy
Justification of Estimates for Fiscal Year 1993

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AIRCRAFT PROCUREMENT, NAVY

For construction, procurement, production, modification and modernization of aircraft, equipment, including ordnance, spare parts, and accessories therefor; specialized equipment; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; \$6,653,679,000 of which \$13,487,000 shall be available only for the Navy Reserve and Marine Corps Reserve, to remain available for obligation until September 30, 1995.

Financing

The FY 1993 budget plan of \$6,653,679,000 for the Aircraft Procurement, Navy appropriation is to be financed by new obligational authority.

**Aircraft Procurement, Navy
Program and Financing (in Thousands of dollars)**

Identification code	17-1508-0-1-051	Budget Plan (Amounts for PROCUREMENT actions programmed)			Obligations			
		1991 actual	1992 est.	1993 est.	1991 actual	1992 est.	1993 est.	
Program by activities:								
Direct program:								
00.0101	Combat aircraft	4,470,274	4,284,904	3,739,154	3,729,561	4,296,425	4,658,587	
00.0301	Trainer aircraft	157,775	365,896	303,474	326,862	366,140	301,701	
00.0401	Other aircraft	6,054		117,398	95,986	102	98,933	
00.0501	Modification of aircraft	2,272,864	1,281,816	1,032,303	1,146,857	2,580,479	1,075,790	
00.0601	Aircraft spares and repair parts	1,208,794	945,662	835,549	1,110,497	992,124	882,725	
00.0701	Aircraft support equipment and facilities	475,430	550,027	625,801	447,253	523,658	613,874	
00.8101	Total direct program	8,590,991	7,438,305	6,653,879	6,856,719	8,740,926	7,601,610	
01.0101	Reimbursable program	50,533	6,800	7,100	45,101	15,858	7,100	
10.0001	Total	8,641,524	7,445,105	6,660,779	6,901,820	8,756,786	7,608,710	
Financing:								
11.0001	Offsetting collections from:	-2,408	-6,800	-7,100	-1,256	-6,800	-7,100	
13.0001	Federal funds(-)	-48,110			-46,857			
14.0001	Trust funds(-)	-15			-14			
17.0001	Non-Federal sources(-)				-1,272,529			
Unobligated balance available, start of year:								
21.40002	Recovery of prior year obligations				-1,474,295	-2,646,169	-2,186,069	
21.40003	Per completion of prior year budget plans	-10,600	-1,140,100		-10,600	-1,140,100		
21.40004	Available to finance new budget plans	851,600						
21.40005	Reprogramming from/to prior year budget plan	-1,837,954						
24.40002	Unobligated balance available, end of year:				2,646,169	2,186,069	1,238,151	
24.40003	For completion of prior year budget plans	1,140,100			1,140,100			
25.0001	Available to finance subsequent year budget	92,854			92,854			
30.0001	Unobligated balance expiring							
Budget authority:								
40.0001	Appropriation	7,975,391	7,149,805	6,653,879	7,975,391	7,149,805	6,653,879	
40.7903	Reduction pursuant to P.L. 102-172 (-)	7,802,051	6,948,620	6,653,879	7,802,051	6,948,620	6,653,879	
41.0001	Transferred to other accounts (-)	-10,600	-14,615	-1,156,800	-10,600	-14,615	-1,156,800	
42.0001	Transferred from other accounts	183,940	1,372,600		183,940	1,372,600		
43.0001	Appropriation (adjusted)	7,975,391	7,149,805	6,653,879	7,975,391	7,149,805	6,653,879	

Aircraft Procurement, Navy
Program and Financing (In Thousands of dollars)

	Identification code	Budget Plan (amounts for PROCUREMENT			Obligations		
		Actions programmed		1991 actual	1992 est.	1993 est.	1992 est.
		1991 actual	1992 est.				
	17-1806-0-1-051						
	Retention of obligations to outlays:						
	71.0001	Outlays incurred					
	72.4001	Outlaid balance, start of year					
	74.4001	Outlaid balance, end of year					
	77.0001	Adjustments in expired accounts (net)					
	78.0001	Adjustments in unexpired accounts					
		Outlays (net)					
	90.0001						
				9,058,147	8,189,759	7,887,231	

Aircraft Procurement, Navy
Object Classification (in Thousands of dollars)

		1991 actual	1992 est.	1993 est.
Identification code	17-1500-0-1-051			
Direct obligations:				
Other services:				
125.002	Purchases from industrial funds	31,540	46,259	56,011
126.001	Supplies and materials	1,035,384	1,445,848	1,753,798
131.001	Equipment	8,789,815	7,249,021	5,791,801
		6,856,719	8,740,928	7,801,610
199.001	Total Direct obligations			
Reimbursable obligations:				
Equipment				
231.001		45,101	15,858	7,100
		45,101	15,858	7,100
299.001	Total Reimbursable obligations			
999.901	Total obligations			
		6,901,820	8,756,786	7,808,710

Aircraft Procurement, Navy (Rescission Proposal)		SUPPLEMENTAL	
Program and Financing (in Thousands of dollars)		Obligations	
Budget Plan (amounts for PROCUREMENT actions programmed)			
		1991 actual	1992 est.
		1993 est.	1993 est.
Identification code	17-1500-5-1-061		
Program by activities:			
Direct program:		-79,000	-6,320
00.0101 Combat aircraft		-40,000	-3,200
00.0301 Trainer aircraft		-166,000	-13,280
00.0601 Modification of aircraft			
10,0001 Total		-285,000	-22,800
Financing:			
Unobligated balance available, start of year:			37,050
21.4002 For completion of prior year budget plans			
24.4002 Unobligated balance available, end of year:			-14,250
For completion of prior year budget plans			
40.3001 Budget authority (Appropriation rescission p		-285,000	-285,000
Relation of obligations to outlays:			
71.0001 Obligations incurred			-22,800
72.4001 Unobligated balance, start of year			-209,475
74.4001 Unobligated balance, end of year			140,790
90.0001 Outlays (net)			-38,475
			-91,495

Aircraft Procurement, Navy
(Recission Proposal)
Object Classification (in Thousands of dollars) SUPPLEMENTAL

	1991 actual	1992 est.	1993 est.
Identification code	17-1500-5-1-051		
Direct obligations:			
131.001 Equipment	-247,950	-22,800	
190.001 Total Direct obligations	-247,950	-22,800	
980.001 Total obligations	-247,950	-22,800	

Budget Activity 1: Combat Aircraft

(In Thousands)

FY 1993 Amended Estimate	\$3,739,154
FY 1993 Change	- 567,794
FY 1993 Initial Estimate	\$4,306,948
FY 1992 Estimate	\$4,215,904
FY 1991 Actual	\$4,470,274

Purposes and Scope of Work

Navy and Marine Corps combat aircraft are procured and remanufactured under this budget activity. These aircraft include fixed-wing and rotary configurations and are grouped generally into the categories of attack, fighter, and anti-submarine warfare (ASW). In addition to these general categories, aircraft which directly support combat operations in specialized missions, such as aerial assault, reconnaissance, observation, electronic warfare, airborne mine countermeasures, vertical onboard delivery and early warning are also procured in this budget activity. Funds are budgeted to procure fully equipped aircraft, including engines and avionics equipment, ancillary mission equipment, special ground support and training equipment, and technical publications. Funds are also budgeted to remanufacture existing aircraft into new configurations.

Advance procurement funds are also included to finance long lead time effort, materials, and equipments for the following year program.

Justification of Funds

Funds for procurement of six different combat aircraft models, including one strike fighter, four helicopters, and one electronic warfare in FY 1993. The amounts shown below finance: (1) aircraft procurement; (2) advance procurement which is justified separately at the end of the budget activity; and (3) aircraft initial spares and repair parts which are budgeted and justified in budget activity 6.

EA-6B/Remanufacture (Electronic Warfare) PROWLER

(Dollars in Millions)				
	FY 1992		FY 1993	
	Qty	Amt	Qty	Amt
Procurement	-	98.2	3	482.7
Advance Procurement		17.0		47.3
Initial Spares		2.1		64.0

The carrier-based EA-6B is an advanced electronic warfare (EW) aircraft which provides protection to Navy strike aircraft by jamming enemy radar-controlled weapons. An improved version, the Advanced Capability (ADVCAP), is being initiated through a remanufacture program. Under this program older EA-6B aircraft will be stricken from the inventory, stripped down to the bare airframe, and then rebuilt to the ADVCAP configuration. This process benefits the Navy by making substantial use of the original investment in these

aircraft while providing significantly improved capability. The ADVCAP configuration features a new receiver processor group to close frequency gaps, improve radar integration and communication countermeasures, and decrease reaction time. Other elements of ADVCAP include the upgraded J-52 P-409 engine for improved thrust, modified airfoil surfaces to improve stall margins and defensive maneuvering, and the inclusion of the Standard Attitude Heading Reference System and Global Positioning System (GPS).

The FY 1992 program of \$98.2 million funds non-recurring effort associated with start of the ADVCAP manufacture and continuation of fleet support, ECM pod and other ancillary equipment procurements. Funding of \$482.7 million is requested in FY 1993 to remanufacture three ADVCAP aircraft.

AV-8B (V/STOL) HARRIER

(Dollars in Millions)				
	FY 1992		FY 1993	
	Qty	Amt	Qty	Amt
Procurement	6	230.0	-	-
Advance Procurement	-	-	-	-
Initial Spares		9.7		-

The AV-8B is an improved vectored thrust vertical/short takeoff and landing aircraft based on the AV-8A concept and the Pegasus II engine which has up to twice the range of payload of the older Harrier. It combines aerodynamic improvements with a new stability augmentation system to reduce pilot workload and includes the night attack mission configuration that expands aircraft availability and provides a more capable and reliable light attack aircraft. The AV-8B meets the Marine Corps' requirement for a light attack aircraft which can operate from austere forward sites in direct support of ground forces. The FY 1992 funding of \$230.0 million will procure six aircraft to replace fleet assets which were destroyed during Operation Desert Storm. No procurement is requested in FY 1993.

F-14D (Fighter) TOMCAT

(Dollars in Millions)				
	FY 1992		FY 1993	
	Qty	Amt	Qty	Amt
Procurement	-	172.5	-	143.1
Advance Procurement		-		-
Initial Spares		29.5		-

The F-14 is a high performance, fleet air defense/air superiority fighter. It is a two seat, variable sweep wing, supersonic, carrier-based airborne weapons system. The F-14 has visual attack and all-weather capability to deliver PHOENIX and SPARROW missiles. It also employs the M-61 gun and SIDEWINDER missile for close-in air-to-air combat. The F-14, armed with the PHOENIX missile, provides outer air battle protection for carrier battle groups. The F-14D configuration includes the General Electric F-110 GE-400 engine, a new radar (APG-71) and upgraded avionics. The F-14D production/remanufacture program ended with the FY 1991

procurement. FY 1992 and FY 1993 funding of \$172.5 million and \$143.1 million, respectively, is required to shutdown the production line and complete procurement of ancillary equipment, peculiar support equipment, and publications to support aircraft in the inventory.

F/A-18 C/D (Strike Fighter) HORNET

<u>(Dollars in Millions)</u>			
	<u>FY 1992</u>	<u>FY 1993</u>	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>
Procurement	48	2,022.1	48
Advance Procurement		149.5	150.3
Initial Spares		72.8	87.3

The F/A-18 Naval Strike Fighter is a twin-engine, multimission tactical aircraft. Designed to replace the F-4 PHANTOM and A-7 CORSAIR, the F/A-18 is employed in Navy and Marine Corps strike fighter squadrons. Two-seat versions with a Night Attack All-Weather capability are being built, as well as a version for tactical reconnaissance. The F/A-18 is missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality offers the Operational Commander more flexibility in employing his tactical aircraft in changing scenarios. The primary design missions are fighter escort and interdiction, with fleet air defense and close air support as additional roles. On attack missions the same airframe, engine, flight control, and weapon systems are used as on fighter missions, thus excellent fighter and self defense capability is retained. The FY 1992 funding of \$2,022.1 million is for procurement of 48 aircraft including replacement of nine aircraft lost during Desert Storm operations. FY 1993 funding of \$1,658.3 million will procure an additional 48 aircraft to provide for fleet inventory requirements.

CH-53E (Helicopter) SUPER STATION

<u>(Dollars in Millions)</u>			
	<u>FY 1992</u>	<u>FY 1993</u>	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>
Procurement	16	338.4	20
Advance Procurement		32.0	48.6
Initial Spares		2.5	1.9

The CH-53E is a shipboard compatible, heavy lift transport helicopter configured for both Marine and Navy missions. Marine missions include amphibious/blearing assault, providing lift and movement of cargo and troops, and heavy lift shore operations including tactical recovery of downed or damaged aircraft and equipment. Navy missions include vertical onboard delivery (VOD). The MH-53E helicopter is employed for airborne mine countermeasure missions and has significantly enhanced mission capabilities over the predecessor RH-53D. FY 1992 funding will procure 16 CH-53E aircraft. The FY 1993 request of \$464.4 million will procure 16 CH-53E and 4 MH-53E aircraft for Navy and Marine Corps inventory requirements.

AH-1W (Helicopter) SEA COBRA

<u>(Dollars in Millions)</u>			
	<u>FY 1992</u>	<u>FY 1993</u>	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>
Procurement	14	146.3	12
Advance Procurement		-	123.9
Initial Spares		5.2	.5

The AH-1W helicopter is an improved version of the Marine AH-1J, which incorporates an updated twin-pack engine (T700-GE-401) for increased performance, reliability and hot day performance. It has a TOW missile capability, a 20mm nose-mounted turret gun, a wing stores armament management system for selective release of externally carried weapons and a HELLFIRE missile system. The AH-1W missions include escort and protection of troop assault helicopters, landing zone preparation immediately prior to the arrival of assault helicopters, landing zone fire suppression during the assault phase, and fire support during ground escort operations. The FY 1992 funding of \$146.3 million is for the procurement of 14 aircraft to build up the inventory level and to replace two aircraft destroyed during Desert Storm operations. The FY 1993 request includes \$123.9 million for 12 aircraft to continue the inventory buildup.

SH-60B (Anti-Submarine Warfare Helicopter) SEAHAWK

<u>(Dollars in Millions)</u>			
	<u>FY 1992</u>	<u>FY 1993</u>	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>
Procurement	13	221.9	12
Advance Procurement		38.5	216.9
Initial Spares		6.7	45.9
			3.3

The SH-60B SEAHAWK is the airborne component of the Light Airborne Multi-Purpose System (LAMPS) MK III ship/air weapon system. LAMPS MK III is a computer integrated ship/helicopter system that increases the effectiveness of surface combatants for Anti-Submarine Warfare (ASW). The helicopter provides a remote platform for deployment of sonobuoys and torpedoes, processing of acoustic and magnetic anomaly detection sensor information, and an elevated platform for radar and electronic warfare support measures. The ship provides sensor processing, command and control, integration of LAMPS information gained from other sensors, the landing and traversing system, visual landing aids, and maintenance and support facilities for the aircraft. SH-60B secondary missions include anti-ship surveillance and targeting, search and rescue, vertical replenishment, medical evacuation and communications relay. The SH-60B carries a crew of three, approximately 2,000 lbs of mission avionics, and has provisions for sonobuoys and MK-46 torpedoes. A block upgrade incorporated in the FY 1990 production aircraft includes the Penguin missile, MK 50 torpedo compatibility, 99 Channel Sonobuoy Receiver, and GPS. \$221.9 million in FY 1992 funds the procurement of 13 helicopters to increase fleet inventory levels and to replace one aircraft lost during Desert Storm operations. Funding of \$216.9 million is requested in FY 1993 to procure 12 additional aircraft to continue to build fleet aircraft inventory levels.

SH-60F CV (Anti-Submarine Warfare Helicopter)

<u>(Dollars in Millions)</u>			
	<u>FY 1992</u>	<u>FY 1993</u>	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>
Procurement	12	201.7	12
Advance Procurement			48.2
Initial Spares			16.1

The SH-60F CV ASW helicopter provides carrier battle groups with inner zone ASW protection using dipping sonar and an on-board sonobuoy processor. Secondary missions include search and rescue, logistic support, medical evacuation, and plane guard. The ultimate users are ASW helicopter squadrons and CV class ships. Funds totaling \$201.7 million in FY 1992 and \$221.3 in FY 1993 are required to procure 12 aircraft each year to continue the phased replacement of aging SH-3 assets.

E-2C (Early Warning) Hawkeye

<u>(Dollars in Millions)</u>			
	<u>FY 1992</u>	<u>FY 1993</u>	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>
Procurement	6	499.5	-
Advance Procurement		-	96.2
Initial Spares		29.1	-

The E-2C is a carrier-based airborne early warning/command and control system designed for fleet air defense. Additionally, it provides the battle group commander with a strike control and surveillance capability. The E-2C, first procured in FY 1972, has steadily improved its capabilities with three major states of the art avionics system changes, including a new radar antenna and passive detection system. The latest E-2C Group II production model was introduced to the fleet in December 1991. Major improvements to the system are its extended radar range, incorporation of a dual IFF, greatly enhanced system reliability, and improved overland detection. The final six E-2C aircraft are being procured in FY 1992 at a cost of \$499.5 million. The FY 1993 request of \$96.2 million will fund production line shutdown and remaining support equipment requirements.

Advance Procurement

The FY 1992 budget includes \$285.2 million for advance procurement of material and effort for FY 1993 production. The FY 1993 budget includes \$332.3 million for advance procurement to support planned FY 1994 procurements. An itemization of the requirements follows:

Aircraft Model	A/C Qty	FY 1993		FY 1994	
		A. P. in FY 92	A. P. in FY 93	A/C Qty	A. P. in FY 93
EA-6B Remanufacture	3	17.0	9	47.3	47.3
F/A-18 C/D	48	149.5	39	150.3	150.3
C/NH-53	20	32.0	20	48.6	48.6
SH-60B	12	38.5	12	45.9	45.9
SH-60F	12	48.2	12	40.2	40.2

The advance procurement listed is required to ensure timely delivery of the planned FY 1993 and FY 1994 aircraft. The amounts budgeted for airframe, engines, and contractor furnished equipment long lead items are funded on a termination liability basis using advance acquisition contracts. This approach minimizes the amount of long lead funding required by the prime contractor to protect the delivery schedule. For most government furnished equipments, requirements are calculated for each item of equipment, considering the planned aircraft quantity, production leadtime, and prime contractor installation leadtime (i.e., the amount of time the item is needed at the factory prior to aircraft delivery). Certain equipment, primarily avionics items, are budgeted as advance procurement to ensure meeting planned aircraft production schedules.

Budget Activity 2: Airlift Aircraft

(In Thousands)

	FY 1993	Amended Estimate	\$	-0-
FY 1993 Change			\$	-0-
FY 1993 Initial Estimate			\$	-0-
FY 1992 Estimate			\$	-0-
FY 1991 Actual			\$	-0-

Purpose and Scope of Work

This budget activity provides for the procurement of fleet tactical support aircraft needed to fulfill the Navy's airlift support requirements.

Justification of Funds

No funds are requested in FY 1992 or FY 1993 for procurement of aircraft in this budget activity.

Budget Activity 3: Trainer Aircraft

(In Thousands)

FY 1993	Amended Estimate	\$303,474
FY 1993	Change	\$-21,155
FY 1993	Initial Estimate	\$324,629
FY 1992	Estimate	\$325,896
FY 1991	Actual	\$157,775

Purpose and Scope of Work

The Naval Air Training Command needs aircraft specifically designed for aircrew training in order to provide the Navy, Marine Corps, and Coast Guard with well trained and highly skilled pilots, navigators, and aircrew. Aircraft procured under Budget Activity 3 are used to train students in basic and advanced flying techniques, navigation, instrument flying and numerous other skills required before the transition to high performance fleet aircraft.

Justification of Funds

Funds totaling \$325.9 million are included in FY 1992 for procurement of 12 T-45A aircraft. \$303.5 million is requested in FY 1993 to procure another 12 T-45A aircraft.

T-45TS (Trainer) COCKPIT

(Dollars in Millions)			
	FY 1992	FY 1993	
	Qty	Amt	Qty
Procurement	12	304.9	12
Advance Procurement		21.0	47.7
Spares		27.3	23.6

The T-45 Training System (T-45TS) is comprised of aircraft, simulators, academics, a training integration system (TIS), and contractor logistic support. The T-45A COCKPIT aircraft is a derivative of the British Aerospace HAWK aircraft, a tandem seat aircraft powered by a single F-405 (Rolls Royce Adour turbofan engine). The T-45A is being adapted to provide the capability for carrier catapult takeoffs and arrested landings. The simulator suite includes both Instrument Flight Trainers and Operational Flight Trainers. Academics include textbook materials, classroom aids and a computer assisted instruction system. The TIS utilizes existing hardware and software to provide planning, scheduling, and tracking of training events in order to achieve required training efficiency. In FY 1992, \$304.9 million is required to procure 12 aircraft. \$255.7 million is requested in FY 1993 for 12 additional aircraft to meet pilot training requirements. Also, \$21.0 million in FY 1992 and \$47.7 million in FY 1993 is required for advance procurement of long lead time materials in support of FY 1993 and FY 1994 planned procurements.

Budget Activity 4: Other Aircraft

	(In Thousands)	
FY 1993	Amended Estimate	\$117,398
FY 1993	Charge	\$-45,889
FY 1993	Initial Estimate	\$163,287
FY 1992	Estimate	\$ -0-
FY 1991	Actual	\$ 6,054

Programs and Scope of Work

Aircraft other than those associated with combat, airlift, and training missions are procured under Budget Activity 4.

Justification of Funds

A total of \$117.4 million is included in FY 1993 for procurement of seven HH-60H helicopters.

HH-60H Helicopter

	(Dollars in Millions)		
	FY 1992	QTY	FY 1993
Procurement	-	-	117.4
Advance Procurement	-	-	-
Spares	-	5.7	-

The HH-60H is a derivative of the SH-60B/F helicopters and is capable of deploying from Recovery, Assist, Sealing and Traversing (RAST) system configured surface combatants. HH-60H aircraft support the primary mission of Night Strike Rescue (SR) and Special Warfare Support (SWS). The HH-60H is currently operated by the Naval Reserve, however the FY 1993 funded aircraft will be deployed and operated by SH-60F squadrons (six SH-60Fs/two HH-60Fs) to support Battle Group SR and SWS requirements. On-going developmental testing to verify correction of deficiencies identified during previous test periods is scheduled to be completed in March 1992. The FY 1993 request of \$177.4 million will procure seven aircraft for the carrier battle group SR and SWS mission requirement.

Budget Activity 5: Modification of Aircraft

(In Thousands)

FY 1993 Amended Estimate	\$1,032,303
FY 1993 Change	\$ -81,930
FY 1993 Initial Estimate	\$1,114,233
FY 1992 Estimate	\$1,115,816
FY 1991 Actual	\$2,272,664

Purpose and Scope of Work

The Aircraft Modification program provides for improvements to operational capability, maintainability, reliability, and safety and/or extends the service life of Navy and Marine Corps aircraft.

Justification of Funds

In order to fulfill inventory requirements, it has become mandatory to operate many older aircraft beyond their originally programmed service life and update their weapon systems so that they remain capable of continued effective operation in new threat environments. In addition, it is often more cost-effective to pursue selective airframe/avionics upgrade through modification programs rather than to initiate more costly new construction efforts. To accomplish these two objectives, the Navy pursues service life extension and weapons modernization programs. These modifications involve complex engineering changes which require a major production effort and are often accomplished at a contractor's facility, with aircraft inducted into an assembly line for the conversion/modernization programs. A substantial portion of the funds programmed in FY 1992 and requested in FY 1993 are for modifications in these categories.

The FY 1992 funds and the FY 1993 budget request also include funds for incorporation of other modifications intended to enhance the operational capabilities of in-service aircraft, their safety-of-flight, reliability and maintainability. Only essential modifications or changes which are necessary to satisfy the most urgent operational requirements are included in this budget request. The FY 1992 funds provided and FY 1993 budget request fully funds the procurement and installation of modification equipment, as well as concurrent maintenance and repair including those kits furnished under warranty.

The following narrative summary highlights modification requirements by aircraft series and model.

A-4 Series Modification

\$6.4 million is funded in FY 1992 for the A-4 aircraft. The modification planned is the completion of the TA-AJ J52-P-6 Engine Safety and Readiness Improvement. This modification will improve engine availability rates.

A-6 Series Modification

\$21.5 million is provided in FY 1992 and \$156.6 million requested in FY 1993 for various A-6 modifications. The principal modification is the A-6 Block Upgrade Program. The funds programmed in FY 1992 (\$8.7 million) and requested in FY 1993 (\$134.0 million) are for the Block IA Upgrade consisting of several configuration improvements which provide the fleet with an upgraded computer, improved display functions, integrated inertial navigation system, GPS, and improved electronic countermeasures.

Funds in the amount of \$3.7 million are requested in FY 1993 for completion of the J52-P-8 Safety and Readiness Improvement program which substantially increases the availability of the P-8 engine. Funds in the amount of \$2.9 million are requested in FY 1993 for the Standoff Air-to-Ground Weapons modification which provides enhanced Walleye II pods for the A-6E. \$1.6 million in FY 1993 is requested for the Pylon Modification program which will correct a safety of flight problem by updating wiring in A-6E wing pylons and make these pylons compatible with the composite wing.

The Gately Night Vision Goggle (NVG) and Compatible Cockpit System will provide the A-6E with an enhanced low light ingress/egress navigation capability in response to an emergent requirement for night vision capability in the A-6. Funding in the amount of \$9.9 million is requested in FY 1993 for this modification.

Finally, \$12.8 million funded in FY 1992 and \$4.5 million requested in FY 1993 are for the A-6 Block Upgrade II program. This program includes improvements or modifications to the constant speed drive/starter, weapons control system wiring enhancements, video tape recorders as an aid for bomb damage assessment, and radar beacon forward air control target data communicator.

EA-6 Series Modification

\$71.5 million is programmed in FY 1992 and \$56.1 million is requested in FY 1993 for EA-6 modifications. The most significant modification planned is the AIQ-99 Pods program (\$25.7 million funded in FY 1992 and \$16.1 million requested in FY 1993). These funds will be used to procure jammer pod components peculiar to the Improved Capability (ICAP) II update.

Other modifications for the EA-6 include the Structural and Avionics Improvement modification (\$21.5 million provided in FY 1992 and \$15.1 million requested in FY 1993) which will correct structural deficiencies identified during fatigue testing and will modify some EA-6B avionics to correct poor reliability. Also planned is the J52-P-408 Safety and Readiness Improvement (\$4.2 million in both FY 1992 and FY 1993), which will vastly improve the availability rate of the engine.

Lastly, funds in the amount of \$20.1 million programmed in FY 1992 and \$20.7 million requested in FY 1993 are for the ICAP II Block 89 Upgrade program. This modification will incorporate safety related

EA-6 Series Modification (Cont.)

Improvements in all EA-6B Block 89 aircraft. This program includes improvements to the boarding platform, top deck cover antenna, fuel discharge system, and radar altimeter warning system. In addition, caution lights, a yaw rate indicating system and several fire safety features will be added.

AV-8 Series Modification

\$19.8 million is funded in FY 1992 and \$11.4 million is requested in FY 1993 for modifications to AV-8 aircraft. \$2 million provided in FY 1992 and \$.5 million requested in FY 1993 are required for Omnibus Reliability & Maintainability (RAM) Improvements. This modification is required to bring delivered aircraft up to full production standard. \$7.4 million provided in FY 1992 and \$10.4 million requested in FY 1993 are to fund the Global Positioning System (GPS) procurement. GPS improves Close Air Support operations with accurate and reliable navigational capability. Specifically, the GPS receiver which replaces the AN/ARN-118 will enhance the degree of capability to conduct day and night operations.

\$5.9 million provided in FY 1992 is for the Automatic Target Handoff System which utilizes preformatted messages to communicate with standard USMC, USAF and US Army digital communication devices. Basically, this system provides increased mission effectiveness and decreased pilot workload. Additionally, \$.8 million are funded in FY 1992 and \$.5 million requested in FY 1993 for the Interior/Exterior Lighting program which will enhance the lighting compatible with Night Vision Goggles (NVGs).

Lastly, \$.5 million in FY 1992 is provided for the AN/ARC-210(V) Electronic Counter Countermeasures Radio (ECCM) Radio. The AN/ARC-210(V) radio system has the capability of countering the jamming signals by the addition of an ECCM containing several algorithms for anti-jamming in both UHF and VHF.

F-14 Series Modification

\$85.4 million funded in FY 1992 and \$25.6 million requested in FY 1993 are required for F-14 modification programs. Various deficiencies identified during aircraft fatigue tests will be corrected in the Structural Improvements Program. \$20.5 million programmed in FY 1992 and \$20.1 million requested in FY 1993 are required to continue this program; specifically the 5000 hour time compliance requirement (TCR).

Two ongoing modifications programmed within the F-14 are the MXU-611 Jettison Release Program and the FLAP/SLAT System Improvement for which funds are provided in FY 1992 (\$1.3 million and \$3.5 million, respectively). The MXU Jettison release modification will minimize the risk of cartridge blow out due to inadvertent firing of the MXU-611. The FLAP/SLAT System improvement will correct several deficiencies in the maneuvering FLAP/SLAT system which is experiencing unacceptable high failure rates.

F-14 Series Modification (Cont.)

The AN/ALR-67 program, which was initiated in FY 1991, has been superseded by the F-14A/B Structural Maintenance and Survivability Block Upgrade. This program will upgrade 196 F-14 Series aircraft, thereby extending their useful life by incorporating threat countermeasures enhancements (ALR-67 Radar Warning Receiver and BOL Chaff), the Hybrid 5400B Computer, two 1553B digital data buses, Programmable Tactical Information Display, AWG-15G weapon control unit, the Programmable Multiple Display Indicator Group, and structural modifications (time compliance requirements). \$58.3 million is funded in FY 1992 to perform non recurring engineering to procure test articles, and to do ground and flight testing associated with integrating these systems into the F-14 aircraft. Procurement of the first 30 upgrade kits is currently programmed in FY 1994.

\$1.8 million and \$1.7 million in FY 1992 and FY 1993, respectively, are for the Structural Data Recorder System (SDRS, or the AN/ASH-37). The AN/ASH-37 will record the flight parameters necessary to accurately determine, track, and manage the fatigue life usage of the aircraft and critical structural components. Fatigue life monitoring is the only means to ensure the structural life safety and to maximize the service life of fleet aircraft. This program provisions the aircraft for the SDRS hardware. \$3.7 million is requested in FY 1993 to provision F-14 aircraft to receive GPS. The GPS system will provide three dimensional position, velocity and time information to suitably equipped users anywhere on or near the earth. GPS is designed to provide highly accurate passive position (16 meters), velocity and time to users worldwide in all weather conditions.

ADVERSARY Series Modification

\$3.7 million is programmed in FY 1992 for the F-16N Structural Upgrade. This upgrade will apply a coldwork repair process to the center fuselage, which will provide for a short-term operational flight hour extension. In addition, funding of \$2 million provided in FY 1992 and requested in FY 1993 is required for the Follow-On Structural Fatigue program. This program will replace or correct known fatigue-sensitive structural components and incorporate avionics improvements such as the Structural Monitoring System and the AN/DLQ-33 ECCR System.

ES-3 Series Modification

\$5.5 million is funded in FY 1992 and \$5.7 million is requested in FY 1993 for the S-3A to ES-3A modification (Battle Group Passive Horizon Extension System (BGPHES) Airborne Component). The ES-3A will be a dedicated replacement for the EA-3B using an augmented subset of the EP-3E Conversion-in-lieu-of-Procurement (CILOP) sensor package. The ES-3A configuration includes the Global Positioning System (GPS). Additionally, the ES-3A will contain the BGPHES interoperable data link and will be the airborne component to the BGPHES AN/SLQ-50 surface terminal.

OV-10 Series Modification

\$17.2 million funded in FY 1992 and \$3.8 million requested in FY 1993 are required for OV-10 aircraft modifications. The principal OV-10 modification is the Block Upgrade I (A to D conversion). This upgrade will provide OV-10D configured aircraft with a Night Observation System capability to locate enemy troops, artillery positions, and armored units during periods of low visibility and at night. The \$14.7 million provided in FY 1992 is to upgrade two aircraft, and the \$.2 million requested in FY 1993 is for support.

Two other modifications within the OV-10 are the AN/AVR-2/APR-39 Warning Receiver (\$1.1 million and \$1.8 million in FY 1992 and FY 1993, respectively) and the Global Positioning System (GPS) (\$1.3 million programmed in FY 1992 and \$1.8 million requested in FY 1993). GPS is a space-based radio positioning and navigation system that will provide three dimensional position, velocity, and time information to suitably equipped users worldwide in all weather conditions. These funds are for provisions and support only.

F-18 Series Modification

Funds required in this program are \$28.4 million funded in FY 1992 and \$26.2 million requested in FY 1993, to correct discrepancies identified during testing and by updating delivered F-18 aircraft with components in the present configuration of in-production aircraft. This reduces logistics support costs through a reduction in the number and types of equipment that must be retained in the supply system to support F/A-18 operations.

Additionally, \$3.9 million is requested in FY 1993 to provision F/A-18 aircraft to accept the GPS.

H-46 Series Modification

The H-46 has seven concurrent modification programs with funding programmed in FY 1992 and requested in FY 1993. The major program is the Dynamic Component Upgrade for which \$27.2 million is funded in FY 1992 and \$92.7 million is requested in FY 1993. The increase in FY 1993 funding represents a decision by the Department to accelerate the upgrade and to buy fatigue articles to extend the life of the CH-46 fleet. The upgrade will incorporate design improvements to the critical safety items which have been identified by in-service failure and flight strain survey. The changes increase thickness of critical sections, and make other specific changes to increase resistance to fatigue damage. Also, \$11.8 million is programmed in FY 1992 and \$9.1 million is requested in FY 1993 for the Rotary Wing Head Pitch Shaft Modification. This modification will correct a known safety deficiency by modifying the pitch shaft and housing, and install new sealed corrosion-resistant liners.

H-46 Series Modification (Cont.)

\$20.3 million is provided in FY 1992 and \$15.4 million is requested in FY 1993 for the continuation of the H-46 Block Upgrade. This program provides additional fuel capacity to extend flight time, add a navigation capability, and improve aircraft flotation for emergency water landings. \$2.2 million is funded in FY 1992 for the AN/ARC-210(V) Electronic Counter Countermeasures Radio (ECM). This radio system has the capability of countering jamming signals by the addition of an ECM containing several algorithms for anti-jamming in both UHF and VHF. Additionally, this system provides capability for use as an Automatic Direction Finding (ADF) system receiver and is also compatible with the time signal from GPS and voice/data from the TSEC/KY-58 COMSEC system.

\$4.1 million is both programmed in FY 1992 and requested in FY 1993 for the AN/ASH-37 Structural Data Recorder System (SDRS). This system assists in the monitoring of critical components for a Structural Life Extension Program (SLEP). The system allows the computation of individual component operating life, allowing a much greater utilization of these components than could be obtained by using the required safe life conservative criteria. \$2.4 million and \$5.1 million are funded and requested in FY 1992 and FY 1993, respectively for the Night Vision Goggle (NVG) Head-Up Display. This modification will incorporate the use of Head-Up Displays (HUD) with NVG. This will allow the pilot to quickly ascertain flight data while maintaining an outside visual scan.

Lastly, \$4.7 million is requested in FY 1993 for the Global Positioning System (GPS). This system is designed to provide highly accurate passive position, velocity, and precise time to users worldwide in all weather conditions.

H-53 Series Modification

\$42.3 million is provided in FY 1992 and \$43.8 million requested in FY 1993 for H-53 modifications. Funds are programmed to continue the CH-53E Block Upgrade which started in FY 1988. This modification allows for a common CH-53E configuration while increasing safety, survivability, and maintainability by the addition of machine gun installations, inflight hydraulic fluid replenishment capability, improved chip detectors, composite tail rotor blade, main rotor pylon covers, and cabin egress lighting (\$8.0 million funded in FY 1992).

In addition, funds are required for the AN/AAR-47 Detection System provisions (\$.7 million is programmed/requested in both FY 1992 and FY 1993). This improvement will provide warning of attack by surface-to-air and air-to-air missiles.

Also planned is the continuation of the Crashworthy Fuel System improvement which is designed to contain fuel spillage during and following crash impact, thus improving crew safety. \$5.3 million is requested in FY 1993 for this much needed improvement.

H-53 Series Modification (Cont.)

The Night Vision Goggles program will enhance low level night operations by improving the ability of the crew to see the terrain during low visibility. \$.9 million is funded in FY 1992 and \$3.0 million is requested in FY 1993 to procure cockpit lighting changes. \$20.4 million is provided in FY 1992 and \$17.5 million requested in FY 1993 to begin the Helicopter Night Vision System (HNVS)/APN-217/GPS Program. The HNVS will provide an infrared night vision system resulting in a 90 percent improvement in night/all weather mission capability. This program also includes installation of the APN-217 and GPS which will provide precise, 24 hour, all weather global navigation that is not dependent on ground stations. Also programmed in FY 1992 and requested in FY 1993 (\$11.5 million and \$6.4 million, respectively) is funding for the Global Positioning System (GPS) for MH-53E aircraft. This system will provide the MH-53E with an improved navigation capability necessary to meet overall navigation and mission requirements. This program provisions the aircraft.

In addition, \$3.0 million is programmed in FY 1992 and \$8.8 million is requested in FY 1993 for continuation of the MH-53E Engine Upgrade. This program will solve a safety problem by permitting the aircraft to recover from loss of one engine during towing operations on a hot day. \$.8 million funded in FY 1992 and \$2.0 million requested in FY 1993 are for the AN/APR-39A(XE-2) Upgrade which will incorporate increased survivability in hostile environments by providing warning and protection against radar threats.

Finally, funds are provided in FY 1992 for two radio programs. \$5.4 million is to complete the AN/ARC-182(V) radio modification. This VHF/UHF combination radio provides enhanced VHF-FM, VHF-AM, and UHF-AM/FM secure voice communications. The AN/ARC-182 replaces existing antiquated, obsolete VHF-AM/FM and UHF-FM radios currently installed in the older CH-53E helicopters. \$1.7 million is programmed for non-recurring engineering and ECP drafting for the CNO mandated, state-of-the-art AN/ARC-210(V) VHF/UHF AM/FM Transceiver program. The AN/ARC-210 will replace existing VHF-AM/FM and UHF-FM radios currently installed in the H-53E helicopters and provide full interoperability (HAVEQUICK, SINCgars) with USAF and USA Forces.

SH-60 Series Modification.

The major program for which funds are programmed in FY 1992 (\$27.5 million) and requested in FY 1993 (\$35.2 million) is the SH-60B Block Upgrade. This program upgrades previously delivered aircraft to the latest production configuration. The following mission enhancements are included in this program: Advanced Lightweight Torpedo, 99 Channel Sonobuoy Receiver, Global Positioning System, AN/ARC-182 radios, various maintainability/operability items, and a Power Train Upgrade.

Also, \$1.5 million is funded in FY 1992 for the completion of the Helicopter Emergency Egress Lighting (HEEL) Program. This modification provides emergency lighting used during emergency night landing in the water. This system consists of LED tubing mounted in an inverted "U" shape around the inside egress hatches and doors.

VH-60 Series Modification

\$1 million programmed in FY 1992 is for the continuation of support efforts to the Global Positioning navigation system for executive transport helicopters.

H-1 Series Modification

\$132.9 million is funded in FY 1992 and \$68.4 million is requested in FY 1993 for modifications to the H-1 series aircraft. One of the major modifications ongoing is the AH-1 Block Upgrade. This program which upgrades AH-1T aircraft to the AH-1W configuration includes incorporation of the T-700-GE-401 engine, the HELLCAT Missile System, night vision compatible cockpit, and other avionics changes. \$48.5 million is provided in FY 1992 to complete this vital upgrade program.

The other major modification planned is the AH-1W Night Targeting System. \$48.9 million is programmed in FY 1992 and \$53.5 million is requested in FY 1993 for this program. This joint Israel/U.S. development and production modification will provide a night/adverse weather TOW missile and autonomous HELLCAT missile capability.

Another improvement is the AH-1W Navigation System improvement utilizing the AN/APN-217 Doppler Navigation System and related cockpit instrumentation. This modification will enhance nighttime low level operational capabilities. \$6.8 million is funded in FY 1992 for the completion of this program. \$1.9 million is provided in FY 1992 for the Electronic Warfare Suite. This AN/AAR-47 Missile Warning Set (MWS) is a self-protection, electronic warfare unit designed to alert and protect aircraft from surface-to-air and air-to-air missiles. Provisions for interface with the APR-39A(XE-2) and the AVR-2 Laser Warning receiver are also being incorporated. Also, \$3.3 million is programmed in FY 1992 for AH-1W Structural Data Recording System (SRS). These systems will record the flight parameters necessary to accurately determine, track, and manage the fatigue life usage of the aircraft and critical structural components.

Finally, funds are requested in FY 1993 for GPS Upgrade and ARC-210 ECCM radio for the AH-1W aircraft. GPS will be incorporated using the miniaturized airborne GPS receiver (MAGR), for which \$1.3 million is requested. \$1.8 million is requested for incorporation of ARC-210 ECCM radios which will ensure communication with ground forces in the worst environment.

Also included in this budget request are funds for improvements to UH-1 aircraft. The major modification to the UH-1 aircraft is the COMNAV Block Upgrade. \$3.2 million is funded in FY 1992 and \$4.9 million is requested in FY 1993 for this program. This upgrade includes the AN/APN-217(V)5 Doppler NAV/GPS which provides precise navigation and hover information through multi-purpose indicators. The AN/ARC-210 radio with HAVE QUICK/SINCgars provides the required secure voice communications.

H-1 Series Modification (Cont.)

An AN/ARC-210 radio installed with a satellite communications antenna provides timely, secure voice over-the-horizon communications between the assault forces and the task force commander. In addition, \$3.7 million is programmed in FY 1992 and \$2.4 million is requested in FY 1993 for the AN/AVR-2 and AN/APR-39 Warning Receiver Systems program for the UH-1 aircraft. These systems are being incorporated to increase the survivability in hostile environments by providing warning and protection against laser and radar threats. FY 1992 also includes funds for the procurement of Navigation Thermal Imaging Systems (\$15.0 million).

Lastly, \$1.6 million is provided in FY 1992 and \$4.4 million requested in FY 1993 for the Night Vision Enhancements modification. This NVG mounted Head Up Display (HUD) will provide essential flight and navigation (from the APN-217 Doppler) data to the pilot and/or copilot via imagery applied directly through the NVG's. The NVG compatible exterior lighting will consist of fixed and strobe IR light elements to provide NVG compatible visual reference for adjacent aircraft.

H-2 Series Modification

\$107.9 million is funded and \$30.9 million is requested in FY 1992 and FY 1993, respectively for the SH-2G Program. This major configuration upgrade includes extensive rework of dynamic component mounting structure, rework on severely corroded areas, modified webbing in the aircraft structure to alleviate cracking, and rewiring of the aircraft electrical system. This program also includes a special mission kit consisting of UHF/VHF radio, missile warning set, jammer, forward looking infrared system and the Block Upgrade avionics equipment consisting of an acoustic processor, multi-purpose display, 99 channel sonobuoy receiver, interface control unit 1553 data bus, enhanced tactical navigation system (TACNAV), TACNAV to TACNAV data transfer system, APN-217 doppler, and supporting integrated logistics support. This program will enhance the capability of the aircraft to meet the requirement and maintain mission effectiveness against the projected threat. The program has been reduced in scope to reflect a lower inventory requirement driven by ship retirement schedules. The last eight aircraft are being modified in FY 1992. FY 1993 funding will complete procurement of Forward Looking Infrared Radar self defense kits and provide support for previously modified aircraft. In addition, \$1.8 million is requested in FY 1993 for GPS, which is a space-based radio positioning and navigation system that will provide three dimensional position, velocity, and time information.

H-3 Series Modification

\$39.4 million is programmed in FY 1992 and \$2.8 million is requested in FY 1993 to fund H-3 series modifications. The SH-3H/G/D Service Life Extension Program is designed to extend the service life of the SH-3 past the year 2000 to provide essential CV helo and station SAR mission capability. Funds in the

H-3 Series Modification (Cont.)

amount of \$7.7 million are funded in FY 1992 and \$2.8 million is requested in FY 1993 for the continuation of this program. Also requested is \$.1 million in FY 1993 for the Global Positioning System (GPS) which is a miniaturized GPS to be installed in the SH-3 aircraft. This system will provide independent 24 hour all weather navigational coverage.

In addition, funds are provided in FY 1992 (\$31.7 million) for improvements to the VH-3D. The SLEP program for which \$30.4 million in FY 1992 is programmed is required to increase VH-3D service life from 7,500 to 14,000 hours, extend mission life to the year 2005 and qualify the aircraft at a higher maximum gross weight. Also funded is \$.1.2 million in FY 1992 for incorporation of NAVSTAR GPS. This operational and safety and improvement program incorporates NAVSTAR GPS into 11 VH-3D aircraft. In FY 1993, the VH-3 program is consolidated in the Executive Helo Modification line item.

EP-3 Series Modification

\$18.4 million is funded in FY 1992 and \$33.0 million is requested in FY 1993 for the Conversion-in-lieu-of-Procurement (CILOP) program to modify 12 aging P-3C aircraft to EP-3 configuration. This program crossdecks/modifies existing EP-3 aircraft special/ESM subsystems and procures, installs, and integrates common configuration ESM and special subsystems into a standardized EP-3 ESM weapons system. This standardized configuration will improve the weapons system capability and will be airframe common to the P-3C ASW community and its worldwide logistics support system.

P-3 Series Modification

\$18.4 million is provided and \$49.9 million requested in FY 1992 and FY 1993, respectively for P-3 modifications. Continuation of the classified Special Project Aircraft effort is requested with funds of \$4.0 million in FY 1992 and \$19.3 million in FY 1993.

The Update III Block Upgrade (\$8.6 million programmed in FY 1992 and \$19.1 million requested in FY 1993) improves the acoustic processing system utilizing the Navy Standard AN/UY5-1, the ARR-78 Receiver, and USQ-78 Display and Control. Associated upgrades are required to interface with the P-3 main computer systems. \$.5 million is provided in FY 1992 and \$.4 million requested in FY 1993 for the RP-3 Block Modification. This is a block upgrade to the communication/navigation avionics in order to continue operational safety. In addition, \$.1.8 million in both FY 1992 and FY 1993 is for continuation of the Omnibus Reliability and Maintainability (R&M) Improvement Program. These funds are required to implement various minor cost effective changes to the P-3 Weapon System. \$.4 million is requested in FY 1993 for the SDRS program. This system records flight parameters necessary to accurately determine, track and manage the fatigue life usage of the aircraft and critical structural components.

P-3 Series Modification (Cont.)

\$2.1 million in FY 1993 is requested for the Ground Proximity Warning System (GPWS). This system is a low-cost, highly reliable stand-alone commercial set. It is a reliable integration of on-board sensor data and provides an aural warning for excessive descent rate, terrain closure rate, inadvertent descent below glideslope and descent below minimum.

Lastly, \$3.6 million is programmed and \$6.7 million requested in FY 1992 and FY 1993, respectively, for the Global Positioning System (GPS). This is a space-based radio positioning and navigation system that will provide three dimensional position, velocity, and time information to suitably equipped users worldwide in all weather conditions.

S-3 Series Modification

Modifications to the S-3 series aircraft require \$76.9 million funded in FY 1992 and \$17.4 million requested in FY 1993. The principal modification is the S-3 Block Upgrade for which \$76.9 million is programmed in FY 1992 and \$12.7 million is requested in FY 1993. The purpose of this program is to improve Anti-Submarine Warfare (ASW) capabilities of the acoustic, Electronic Sensor Monitor (ESM) and radar subsystems; introduce Electronic Countermeasures (ECM) and Harpoon missile capability; and, increase useful service life through a redesigned Communication Control group.

\$4.4 million is requested in FY 1993 for the Global Positioning System (GPS). The GPS modification will provide increased operational capability and mission effectiveness by providing precise navigation position information to the flight crew for ASW/ASUW prosecutions, on scene tactical coordination and turnover with other ASW/ASUW platforms, and mining.

Lastly, \$.4 million is requested in FY 1993 for the Structural Data Recorder System (SDRS). Incorporation of the SDRS will allow better tracking of aircraft "hot spots" without recurring fleet inspections, allow for repair before costly rework is required, and maximize aircraft service life.

E-2 Series Modification

\$57.4 million is programmed in FY 1992 and \$94.1 million is requested in FY 1993 to modify E-2 aircraft. The principal E-2 modification is the Block Upgrade II program. \$5.1 million is funded in FY 1992 and \$75.3 million is requested in FY 1993 for this program. This dynamic modification program consists of fourteen projects as follows: T56-A-427 Engine, Radar Group I and II, Tactical Command and Control System, Joint Tactical Information Distribution System (JTIDS), Standard Automatic Flight Control System, Carrier Aircraft Inertial Navigation System, Cockpit Instrument Lighting System, High Speed Processor, Global Positioning System, Standard Attitude and Heading Reference System, Enhanced Displays, and Improved Identification Friend or Foe System.

E-2 Series Modification (Cont.)

In addition, \$19.5 million is provided in FY 1992 and \$10.0 million is requested in FY 1993 for the Structural Enhancement program. This program extends the operational life of the aircraft by replacing the wing center section and modifying other structural components. \$19.0 million programmed in FY 1992 and \$4.0 million requested in FY 1993 are required to continue the Block Upgrade I program. This major improvement program includes a 10 KVA emergency generator set, microwave refractometer, various safety mods, pylon fixed fairings, a passive detection system, attitude gyro, vertical control surface replacement, TRAC-A radar antenna, cockpit electronic magnetic interference reduction, computer recorder reproducer, SPN-41 instrument landing system, and standard central air data computer.

\$8.5 million is provided in FY 1992 and \$4.4 million is requested in FY 1993 to complete the Aircrew Emergency Egress Survivability Modification. This allows personnel to egress without the present seat cushion/survival kit/life raft package hanging below the parachute. This safety modification modifies the crew seat to accommodate the revised oxygen and communication connections and to provide a mechanical seat tilt for crew seats in the Combat Information Center compartment to improve crew comfort.

\$8 million is programmed in FY 1992 and \$.4 million is requested in FY 1993 for the Outer Wing Panel (OWP) program. This effort replaced current OWPs which have demonstrated fatigue stress cracks and which are now limited to 2500 flight hours. In conjunction, a structural fatigue data collection system will be installed to provide more accurate structural load data which should result in extended aircraft life. Also, \$.4 million is funded in FY 1992 for completion of the AN/ARC-182 radio program.

Trainer Aircraft Series Modification

\$10.6 million is programmed in FY 1992 and \$1.8 million is requested in FY 1993 for various modifications to trainer aircraft. The trainer aircraft line includes modifications budgeted for the T-34, T-38, T-44, TH-57, and TA-4 series aircraft. Within the account, \$.7 million and \$.6 million are in FY 1992 and FY 1993, respectively for the T-34 Landing Gear Actuation System modification which will reduce landing gear linkage stress. \$1.0 million is both funded in FY 1992 and requested in FY 1993 for the FAA configuration update for the T-44A, T-34C, T-38, and TH-57 aircraft. \$.2 million is provided in FY 1992 as well as requested FY 1993 for the T-44 Service Life Extension Program. Due to T-45 program delays, the TA-4J aircraft will remain in service longer than expected. \$.8 million is funded in FY 1992 for the TA-4J J-52-P6 Reliability and Maintainability Improvement program.

C-130 Series Modification

\$11.7 million is provided in FY 1992 and \$7.3 million is requested in FY 1993 for the Avionics Systems Improvement Program (ASIP) (Phase III). This program will replace old equipment with the latest state-of-the-art equipment. Among the modifications included are the incorporation or modification of the

C-130 Series Modification (Cont.)

solid state propeller synchronization system, compass system, HF secure voice capability, combined altitude radar altimeter, engine instruments, flight detector, addition of the safety-related Ground Proximity Warning System, and many other avionics equipments. Together, these changes will substantially increase safety, reliability and maintainability.

In addition, \$3.7 million programmed in FY 1992 and \$3.1 million requested in FY 1993 is for the Global Positioning System. \$1.5 million is funded in FY 1992 for the AN/ARC-210(V) Radio System. This system has the capability of countering the jamming signals by the addition of an Electronic Counter Countermeasure (ECCM) containing several algorithms for anti-jamming in both UHF and VHF. \$.4 million is requested in FY 1993 for the Structural Data Recorder system (SDRS). The SDRS will record essential flight parameters on a flight-by-flight basis to assure both aircraft and critical component fatigue usage tracking.

FEWSC Modification

The ability to accurately simulate the known and postulated electronic warfare characteristics and tactics of different threats for fleet training is a primary mission element of the Fleet Electronic Warfare Support Group (FEWSC) and its assigned aircraft and equipments. In support of this program, \$17.2 million is programmed in FY 1992 and \$6.7 million is requested in FY 1993 for FEWSC modifications. The major program for which funds in the amount of \$14.4 million funded in FY 1992 and \$6.6 million requested in FY 1993 is the FEWSC F/A-18 Modification. Twelve F/A-18 aircraft are being modified with AN/ALQ-170 provisions.

\$2.2 million is programmed in FY 1992 for the AN/ALT-40 Upgrade. This upgrade will make improvements to the system in order to enable continued realistic threat emitter simulation. Lastly, \$.7 million and \$.1 million are funded/requested in FY 1992 and FY 1993, respectively for continuation of the AN/ALQ-167 and AN/ASF-4 Pods program.

Cargo and Transport Aircraft Series Modification

\$1.8 million is provided in FY 1992 and \$1.7 million is requested in FY 1993 for the Cargo and Transport Modification line item which includes modifications budgeted for the C-9, UC-12, CT-39, and C-2 aircraft.

\$1.6 million is programmed in FY 1992 and \$1.5 million is requested in FY 1993 to continue the C-9B, UC-12, CT-39 Federal Aviation Administration (FAA) configuration update. Regulations require manufacturers of commercial aircraft and associated systems/subsystems to investigate all discrepant conditions, failures, and potential safety problems reported by all operators. The results of these investigations with

Cargo and Transport Aircraft Series Modification (Cont.)

recommended corrective action are reviewed/approved by the FAA and Navy and provided to all operators as service bulletins. \$1 million is funded in FY 1992 for C-9 Service Standardization. Lastly, \$.1 million is programmed in FY 1992 and \$.2 million is requested in FY 1993 for the CT-39E/G Service Life Extension Program (SLEP) Modification.

E-6 Series Modification

The major modification for the EA-6 series aircraft is the E-6A Avionics Block Upgrade. \$55.2 million in FY 1992 and \$25.1 million in FY 1993 are included for this program. This mission avionics upgrade will provide a significant increase in reliability and maintainability, enhance system compatibility, and provide increased supportability. This upgrade includes the incorporation of MILSTAR, Frequency/Time Standard Distribution System (FTS), and MILSTAR Message Processor System (MMPS) to be installed in the E-6A/TACAMO Avionics Platform concurrently with the High Power Transmit Set (HPTS). Also, \$.25 million is provided in FY 1992 and \$.6 million requested in FY 1993 for Corrections To Deficiencies. These funds are required so that discrepancies which are discovered during follow-on E-6A testing can be immediately corrected in order to maintain necessary force levels. In addition, funds for the installation of in-warranty engine kits are budgeted in this program. Finally, \$.7 million is included in the FY 1993 request for the Global Positioning System.

Executive Helo Modification

This line item was created to accommodate all VH executive transport helicopter modifications. \$ 27.9 million is requested in FY 1993 for the continuation of three programs - VH-60 GPS (\$.1 million), VH-3D SLEP (\$.27.3 million), and the VH-3D GPS (\$.6 million). In FY 1992 these programs are shown in the VH-60 and H-3 line items.

Various Series Modification

Funds in the amount of \$.1 million are funded in FY 1992 as well as requested in FY 1993 for Miscellaneous R&M Improvements to unique aircraft configurations not covered elsewhere in the modification program.

Power Plant Changes

This program funds procurement of a large number of primarily small dollar value engine modifications designed to extend engine life and incorporate needed reliability and maintainability improvements. In addition, funds for the installation of in-warranty engine change kits are budgeted in this program. For these purposes, \$.27.4 million are provided in FY 1992 and \$.26.3 million is requested in FY 1993.

Miscellaneous Flight Safety Changes

\$2 million is both programmed in FY 1992 and requested in FY 1993 for safety related modifications. This program provides for the procurement of kits to correct flight safety and operational deficiencies which are revealed during fleet operations.

Common IGM Equipment

\$119.1 million is programmed in FY 1992 and \$107.4 million is requested in FY 1993 for common electronic countermeasure equipment. \$58.2 million is provided in FY 1992 and \$64.8 million is requested in FY 1993 for AN/ALE-67(V)2/ECP-510 hardware. The AN/AIR-67(V)2/ECP-510 provides detection and direction finding over the entire radio frequency spectrum of target tracking and missile control systems. This program provides for the procurement of this system for the F/A-18, AV-8B, A-6E and F-14 aircraft. In addition, the AN/AAR-47 Detection System provides warning of approaching missiles by radiation detection and initiates flare ejection. Aircraft supported by this system are the CH-53, CH-46, OV-10, AH-1, and UH-1 (\$14.3 million is funded in FY 1992 and \$4.7 million is requested in FY 1993).

Funds are also required for the AN/APR-39 and AN/AVR-2 hardware procurement. The aircraft supported by these systems are the OV-10, H-53, HH-60H, AH-1, and UH-1. \$28.6 million is programmed in FY 1992 and \$37.8 million is requested in FY 1993 for this program. Lastly, funds are provided in FY 1992 (\$18.0 million) for the BOL CHAFF System supporting the F-14 Aircraft. This system is composed of an electro-mechanical chaff dispenser, a modified "Sidewinder" guided missile launcher rail and an interconnecting box. The system increases the self-protection capability of the F-14.

The aircraft provisions for all these systems are budgeted in the appropriate aircraft platforms accounts.

Common Avionics Changes

\$16.6 million is funded in FY 1992 and \$23.0 million is requested in FY 1993 for common avionics equipment procurement. \$13.1 million is programmed in FY 1992 and \$19.0 million requested in FY 1993 for the NAVSTAR Global Positioning System (GPS) to procure hardware for the various aircraft platforms using GPS. \$3.5 million provided in FY 1992 and \$4.0 million requested in FY 1993 are required for the Structural Data Recording Set (SDRS). The SDRS will record the flight parameters necessary to accurately determine, track, and manage the fatigue life usage of the aircraft and critical structural components. This program procures the hardware in support of the F-14, C-130, P-3, S-3, AH-1W, H-46, H-53, and H-60 platforms which are provisioning the aircraft to receive this system.

Budget Activity 6: Aircraft Spares and Repair Parts

	(In Thousands)
FY 1993 Amended Estimate	\$ 835,549
FY 1993 Change	\$ +18,908
FY 1993 Initial Estimate	\$ 816,641
FY 1992 Estimate	\$ 945,662
FY 1991 Actual	\$1,208,794

Budget and Scope of Work

Budget Activity 6 funds the procurement of the spare equipment and repair parts necessary to support Navy and Marine Corps aircraft procurement and operating programs. The budgeted funds provide for: (1) initial certifying and pipeline quantities of repairable spares and repair parts for new and modified aircraft; and (2) layout of spare and ex-located site outfittings Depot Level Repairable spares from the Department of the Navy Stock Fund (DONS) by means of the aviation outfitting account in the year of delivery, and a small number of non-stock funded replenishment spares.

Justification of Funds

The following table depicts the funding profile for the spares account.

	FY 1991 Initial Spares and Repair Parts	FY 1992 Replenishment Spares and Repair Parts	FY 1993 Total Aircraft Spares and Repair Parts
	\$ 454.5	\$ 390.5	\$ 381.2
	<u>754.2</u>	<u>525.2</u>	<u>454.3</u>
	<u>\$1,208.7</u>	<u>\$ 945.7</u>	<u>\$ 835.5</u>

Initial Spares:

The initial spares requirements support the number, type and deployment of aircraft being procured, remanufactured and modified that are entering the operating program.

The items being procured under the initial spares category include engines, spares for equipments and parts which have been recently introduced and for which there is not sufficient leadtime for the Stock Fund to build. Funding requirements for engines, major avionics, and other equipments which qualify as initial spares are calculated on an item-by-item basis predicated on usage data, failure rates, and engineering estimates to predict usage. Requirements for other initial spares and spare parts are determined on a statistical basis, using the same methodology used in calculating major spare equipment requirements.

The following table shows FY 1992 and FY 1993 Initial Spares and Repair Parts support requirements by aircraft model:

Aircraft Model	A/C Qty	Spares	Peculiar Aviation Total			FY 1993			Total Spares				
			Engines	Spares	Contract Sup	Eq Outfitting	Initial Spares	A/C Qty	Spare Engines	Contract Spares	Eq Outfitting	Initial Spares	
Boeing 737	-	-	.2	1.8	-	-	2.0	3	2.5	55.2	5.8	.5	64.0
AV-8B	6	-	2.4	7.3	-	9.7	-	-	-	-	-	-	-
F-14A/D	-	-	27.1	2.4	-	29.5	-	-	-	-	-	-	-
F/A-18 C/D	48	33.9	37.1	1.8	-	72.8	48	29.8	37.9	-	19.6	.2	87.3
CH-46E-3ME	16	-	2.0	.5	-	2.5	20	-	1.7	-	-	.2	1.9
CH-14W	14	3.9	1.2	-	-	5.1	12	-	.5	-	-	.5	.5
SH-60B	13	-	6.3	.4	-	6.7	12	-	2.7	-	.6	.6	3.3
SH-60F	12	1.6	14.5	-	-	16.1	12	1.1	5.9	-	7.6	7.6	14.6
U-2C	6	4.0	23.7	1.4	-	29.1	-	-	-	-	-	-	-
T-45	12	4.8	22.6	-	-	27.4	12	4.7	18.9	-	-	-	23.6
S-3A	-	29.4	-	-	-	29.4	-	-	-	-	-	-	-
A-6B	-	-	-	.6	-	.6	-	-	-	-	-	-	-
HH-60H	-	-	-	-	-	-	7	5.0	-	-	.7	.7	5.7
B-6A	-	-	3.4	-	-	3.4	-	-	-	-	-	-	-
Rep. of Repairables	-	-	-	-	-	-	-	-	37.5	-	-	-	37.5
Airborne Weapon Spares	1.0	-	-	-	-	1.0	-	-	.1	-	-	-	.1
Training Devices Spares	25.5	-	-	-	-	25.5	-	-	20.5	-	-	-	20.5
Com. Cmd. Sup. / Sup. Repair Parts 1/ Sup. Auto. Test Eng. Parts ¹ / Sup. Cntrlo. Auto Sup. Sys.	-	-	8.7	-	-	8.7	-	-	-	-	13.3	-	13.3
Mod Spares	-	-	6.2	-	-	6.2	-	-	-	-	3.6	-	3.6
TOTAL	77.6	167.0	39.9	-	-	105.8	-	43.1	390.5	180.9	22.7	29.2	381.2

Totals may not add due to rounding.
1/ Supports equipment procured in B.A. 7.

Initial spares and repair parts are categorized as follows:

- (1) Government Furnished Spares Aircraft Engines - (FY 1992 - \$77.6 million; FY 1993 - \$43.1 million).
Spares aircraft engine requirements are calculated on an actuarial basis to support the aircraft operating program with a confidence level of 80% to 90% that a spare engine will be on site and ready for issue when required by combat aircraft. Requirements are determined by establishing flying hours for each type/model aircraft and applying to that program the engine repair and removal rates to determine total engine requirement. On hand and on order assets are deducted from this gross requirement to arrive at a net procurement requirement. Requirements are thus established for initial outfitting of shore and afloat sites and to fill maintenance repair/overhaul pipelines.
- (2) Contractor Spares Support - (FY 1992 - \$167.0 million; FY 1993 - \$180.9 million)
Contractor furnished spares and repair parts are provided for support of new, sophisticated weapons systems or subsystems during their development and fleet introductory phases until the Material Support Date is reached, at which time the Navy supply system assumes responsibility for providing these spares and repair parts. Contractor support is designed to preclude procurement of unnecessary or unstable spare parts before usage data is available or aircraft equipment design is stabilized. Requirements are readiness based, calculated by comparing the new weapon system with actual usage data or historical data for a similar/same aircraft and utilizing the Weapon System Planning Document which provides the site activation schedule. Commencing in FY 1993 Repair of Repairables funds have been included in this category for repair of non-consumable items.
- (3) Support Equipment (Spares) - (FY 1992 - \$39.9 million; FY 1993 - \$22.7 million)
The funding requested here provides for repair parts essential to the support (readiness) of SE end items required for the ground testing, servicing, handling and maintenance of specific weapon systems and their sub-systems. These SE end items require complete integrated logistic support, including repair parts, concurrent with delivery in order to adequately support the related weapon systems. SE spares funding also provides for contractor augmented support. Requirements are determined by the initial quantity of SE end items procured, the complexity/cost of the end items, the number of sites to be supported, the proximity/inter-support relationship of shore-based sites, and the period of time between equipment introduction and material support date.
- (4) Aviation Outfitting Account Initial - (FY 1992 - \$ -0- million; FY 1993 - \$29.2 million)
The funding requested in this section procures spares from the Department of the Navy Stock Fund to field new weapons at ashore operating sites, using peacetime operating rates.

(5) Modification Spares - (FY 1992 - \$105.8 million; FY 1993 - \$105.4 million)

The investment program also includes procurement of initial repairable spares and repair parts to support the modification program financed under Budget Activity 5. Requirements include new procurement and/or the modification of spares and repair parts already in the inventory. Requirements are based on the corresponding elements being procured for the aircraft modification program.

Replenishment Spares:

Total funding requested for all replenishment spares program is \$55.2 million in FY 1992 and \$454.3 million in FY 1993. The replenishment spares element of the budget is made up of: (a) the aviation outfitting support account which provides funding to procure outfitting spares from the Department of the Navy Stock Fund for afloat activities required to support the introduction of new or expanded populations of operating aircraft; (b) replenishment spares procured at the Naval Air Systems Command headquarters to support executive mission helicopters, interservice support requirements and miscellaneous aircraft systems; and (c) a small number of non-stock funded replenishment spares.

The following table shows the FY 1992 and FY 1993 replenishment spares funding levels by category:

	(\$ in Millions)	
	FY 1992	FY 1993
Aviation Outfitting Support	\$ 515.7	\$ 425.1
Inventory Control Point Support	8.8	5.2
Executive Mission Helicopters	13.7	14.3
F-5/F-16N/T-38 Aircraft	15.5	8.0
Miscellaneous Headquarters	<u>1.5</u>	<u>1.7</u>
TOTAL	\$ 555.2	\$ 454.3

The replenishment spares are categorized as follows:

(1) Aviation Outfitting Support - (FY 1992 - \$515.7 million; FY 1993 - \$425.1 million)

This account funds the procurement for all afloat and shore activity outfittings required to support fleet operating aircraft. These requirements are procured by the Department of the Navy Stock Fund in advance and are subsequently "bought out" by this account. This approach has provided: a) improved material availability, b) improved asset management, and c) essential financial flexibility. The benefits are an improved logistics support posture and a corresponding improvement in aircraft readiness.

(2) Inventory Control Point (ICP) Support - (FY 1992 - \$8.8 million; FY 1993 - \$5.2 million)

Spare repairable components are managed by the Aviation Supply Office and the Ships Parts Control Center, which have been assigned program support responsibility for specific aircraft/weapon systems. Spares requirements are calculated by an individual line item stratification technique. The Uniform Inventory Control Point stratification requirements are computed utilizing DOD logistics guidance, Navy program planning data, and technical, procurement and inventory data maintained by the ICP. During stratification, these components are evaluated in terms of inventory on hand and on order, demand experience, projected demand, and outfitting requirements.

(3) Executive Mission Helicopters - (FY 1992 - \$13.7 million; FY 1993 - \$14.3 million)

Replenishment spares support requirements for the VH-3D and VH-60N Executive Mission aircraft. The Executive mission provides a transportation and evacuation capability for the Chief Executive, Heads of State and other visiting dignitaries. Eleven VH-3D aircraft and nine VH-60A aircraft operate from one primary site and two auxiliary sites. These helicopters operate for extended periods of time from numerous other locations necessitating selected item packup kits of replenishment spares. Material support requirements are calculated based on inputs from the operating squadron, the aircraft contractor and those peculiar requirements set forth by the Executive Branch. Executive Mission helicopters must have 100% spares support for repairable components. These components are procured so that a spare will be on hand when the component reaches half its projected service life.

(4) F-5/F-16/T-38 Aircraft - (FY 1992 - \$15.5 million; FY 1993 - \$8.0 million)

Funds are required for the procurement of repairable material support from the Air Force for 40 F-5E/F, 26 F-16N and six T-38A aircraft operating at six sites. Material requirements are developed by the weapon system manager and NAVAIR based on past spares usage, the projected flying hour program and the number of sites operating the aircraft.

(5) Miscellaneous NAVAIR Headquarters Support - (FY 1992 - \$1.5 million; FY 1993 - \$1.7 million)

This includes material support requirements for the Fleet Electronic Warfare Support Group (FEWSG), Project Beartrap, Special Project Mission Avionics and VH-3A aircraft support. Spares requirements for FEWSG, Project Beartrap and Special Project Mission Avionics requirements are developed by the Naval Avionics Center in conjunction with the operational activities, based on past usage and anticipated system changes. VH-3A spares requirements are developed by the fleet operational squadron and NAVAIR, using historical data to project future material requirements.

Budget Activity 7: Aircraft Support Equipment and Facilities

Purpose and Scope of Work

The FY 1992 program of \$550.0 million and the FY 1993 request of \$625.8 million will provide continuing vital effort in the following categories which support aircraft systems:

- (1) Common Ground Equipment, which provides funds for the Consolidated Automated Support System (CLASS) equipment, other Automatic Test Equipment (ATE), Avionics Support Equipment (ASE), various aircraft systems trainers and training aids, and other aircraft ground support equipment including Rapid Deployment Force requirements and Mobile Maintenance Facilities for Marine expeditionary forces.
- (2) Aircraft Industrial Facilities, which provides calibration equipment for Navy standards and calibration laboratories. Funding also provides for capital improvements, modernization, and maintenance of government-owned contractor-operated, aircraft-producing industrial plants.
- (3) Var. Consumables, which provides funds for auxiliary fuel tanks, air refueling stores, pylons, and injector racks and for the modification of these equipments. The items procured in this line are of a consumable nature and are related primarily to the number of sorties flown by combat and training aircraft.
- (4) Other Production Charges, which provides funds for miscellaneous production support and testing services, aircraft cameras, various equipment for United States Coast Guard aircraft, and aircraft pods and instrumentation packages supporting tactical aircarft training and ~~and~~ ^{mobile} sea range systems.
- (5) Special Support Equipment, which provides funds in support of a classified program.
- (6) First Destination Transportation, which provides for the movement of newly procured equipment and material from the contractor's plant to the initial point of receipt by the government. These costs were previously budgeted in the Operations and Maintenance, Navy appropriation; however, they have been transferred to the procurement appropriations beginning in FY 1991 to more accurately reflect the entire acquisition cost of equipment.

Justification of Funds

Funding requirements for the FY 1992 and FY 1993 programs are outlined in the following table:

	<u>(Dollars in Millions)</u>	
	<u>FY 1992</u>	<u>FY 1993</u>
Common Ground Equipment	\$417.5	\$453.4
Aircraft Industrial Facilities	37.2	30.5
War Consumables	15.5	15.2
Other Production Charges	35.8	83.1
Special Support Equipment	37.9	37.6
First Destination Transportation	<u>6.1</u>	<u>6.0</u>
Total B.A. 7	<u>\$550.0</u>	<u>\$625.8</u>

Common Ground Equipment
Funding for the various segments of this program is depicted below and described in subsequent paragraphs:

	<u>(Dollars in Millions)</u>	
	<u>FY 1992</u>	<u>FY 1993</u>
(a) Consolidated Automated Support Equipment (CASS)	\$143.5	\$161.8
(b) Training Equipment	65.3	53.3
(c) Automatic Test Equipment (ATE)	85.5	107.4
(d) Aircraft Ground Support Equipment	43.6	38.8
(e) Mobile Maintenance Facilities	9.9	10.2
(f) Inventory Control Point (ICP)	22.8	17.3
(g) Managed Support Equipment		
Headquarters Managed Peculiar Support Equipment	11.9	12.2
Gas Turbine Compressor Replacement	16.9	14.9
(h) Avionics Support Equipment	14.2	28.6
(i) Rapid Deployment Force/Maritime Prepositioned Ships	<u>4.0</u>	<u>9.0</u>
Total Common Ground Equipment	<u>\$417.5</u>	<u>\$453.4</u>

Consolidated Automated Support System (CASS) Equipment

The FY 1992 program of \$143.5 million and the request of \$161.8 million in FY 1993 is for the procurement of newly designed, modularly constructed automatic test equipment with computer assisted, multi-functional capability based on standardized hardware and software elements. The CASS design incorporates easily reconfigurable modules which can address varying test requirements and allows for modification to meet the demands of future technologies.

The CASS program will increase material readiness, reduce life cycle costs through standardization of equipment and all logistic elements, improve tester sustainability at depot and intermediate maintenance levels (including aircraft carriers), reduce the proliferation of unique test equipment, and provide Navy-wide test capabilities for existing and future avionics electronic support requirements. CASS will increase repair facility throughput capability, reduce spare parts and personnel training requirements and significantly reduce the space required for avionics testing aboard critically space-limited aircraft carriers.

Training Equipment

The FY 1992 program for training equipment is \$65.3 million and the FY 1993 request is \$53.3 million. The Training Equipment sub-line item provides funds for acquisition of trainers, training equipment, training parts, government furnished equipment and ground support equipment for training purposes, and modifications/changes relating to the above acquisitions. The procurements funded within the Training Equipment sub-line item are limited to: (1) training devices and equipment and related modifications for generalized training programs which provide skills common to more than one weapon system; (2) trainers for out-of-production aircraft; and (3) CFE in support of courses at the Navy Formal Schools. Training related to out-of-production aircraft is dependent upon these funds for all acquisitions, specific trainer-peculiar changes, modification/modernization, and user-generated changes and replacements. The Training Equipment sub-line item is broken into two major categories: General Training Equipment, and Modification/Modernization of Trainers. The following tables display funding profiles within the Training Equipment sub-line item:

General Training Equipment

	(In Thousands)	
	FY 1992	FY 1993
Air Traffic Control Trainers	3,895	2,355
"A" School Trainers	6,210	4,226
Total General Training Equipment	\$10,105	\$ 6,581

Modification/Modernization of Trainers Requirements, including GFE for out-of-production weapon systems

Program	(In Thousands)	
	FY 1992	FY 1993
A-6E	5,712	340
C-2A	2,235	1,850
E/K/C-130	228	1,350
F-14A	12,880	6,161
GFE for Formal Schools	3,495	1,784
H-1	157	385
H-2	8,280	5,886
H-3	323	383
P-3A/B	4,775	7,950
S-3A	4,725	4,515
H-46	9,960	7,046
H-53D	0	7,500
EP/ES-3	2,386	390
AV-8B	0	300
T-44	0	850
Total Modification/Modernization of Trainers	\$55,156	\$46,690

ATE (Automatic Test Equipment)

The budget includes \$85.5 million in FY 1992 and requests \$107.4 million in FY 1993. The ATE segment of the Common Ground Equipment budget line item was established to broaden this category of support equipment acquisition formerly limited to VAST (Versatile Avionics Shop Test). The ATE account has funded the procurement of the Tailored MINI-VAST, as well as a family of module testers.

The FY 1992 and 1993 ATE programs include funding for the Maintenance Data Processing Ground Stations (MDPS), portable ground stations used to support maintenance scheduling by downloading engine and structure usage and fatigue data to ensure safety of flight. The budget request also includes funding for Test Program Set (TPS) Translation/Offload necessary to transition existing test equipment software to CASS as it becomes operational.

Aircraft Ground Support Equipment

The Aircraft Ground Support Equipment element under the Common Ground Equipment line item provides for the initial outfitting of Common Support Equipment under NAVAIR inventory and technical management. These Support Equipment (SE) end items are required for ground testing, servicing, handling, and maintenance of aircraft and aircraft systems. SE items acquired under this budget line item include aircraft propulsion test systems, mobile generators, frequency converters, and other aircraft handling equipment.

A comprehensive acquisition plan has been developed for each FY 1992/1993 SE item to: (1) ensure that the equipment is ready for procurement by the budget year; (2) to determine the type of procurement action to be initiated (multi-year, etc.); (3) verify the inventory objective, and; (4) ensure the consideration of required integrated logistic support elements.

The Support Equipment (SE) which will be procured are determined through one of the following processes:

1. The direct result of the SE ROTE Program (these are items required to support advanced aircraft systems).

2. Reprocurement of current SE required to respond to meet outfitting shortages.
3. Improved versions of current SE required to support expanded airborne equipment capabilities or advanced airborne equipment (electrical servicing equipment, ground air conditioners, etc.).
4. Major modifications of existing SE.
5. Equipment developed to improve the capability of the Fleet and/or to improve safety (aircraft towing equipment, non-destructive inspection equipment, etc.).

To meet requirements in a timely manner, \$43.6 million is programmed in FY 1992 and \$38.8 million is requested in FY 1993.

Mobile Maintenance Facilities

\$9.9 million is programmed in FY 1992 and \$10.2 million is requested in FY 1993 for Mobile Maintenance Facilities. This program provides for the acquisition of mobile facilities and related equipment to support Marine Corps Expeditionary Forces and Navy contingency/mobilization aircraft and weapon system maintenance operations. The concept is to provide rapid-response mobility by the use of relocatable maintenance shelters. Execution of the Marine Corps Aviation mission is dependent on a highly mobile and functionally independent aircraft maintenance support capability.

The basic equipments procured under this sub-line item are the container (van), environmental control unit, ISO loading systems, running gear for ground transport, and frequency converters.

Inventory Control Point (ICP) Managed Support Equipment (SE)

ICP Managed SE funds the procurement of end items of Peculiar Support Equipment (PSE) for out-of-production weapon systems, and all Common Support Equipment (CSE) under the budget, procurement and inventory control of the Aviation Supply Office (ASO), Philadelphia, and the Ships Parts Control Center (SPCC), Mechanicsburg, PA. Spare PSE and CSE end items are normally introduced into the fleet through NAVAIR development and initial procurement. When design is completed and procurement packages become available, the items are transitioned to ASO or SPCC inventory management and funded under this sub-line. Currently, ASO manages some 10,500 individual repairable SE end items such as aircraft jacks and tow bars, whereas SPCC manages some 500 items, primarily cryogenic and armament equipment.

The budget requirements for this element are categorized as follows:

- a. Increased quantities of out-of-production aircraft PSE and CSE required for site outfitting.
- b. Replacement out-of-production aircraft PSE and CSE resulting from wear-out and attrition.
- c. Increased quantities of out-of-production aircraft PSE and CSE required for allowance augmentation.

Sample SE end items procured under this sub-line item include aircraft jacks, aircraft tow bars, hoisting slings, armament handling equipment and maintenance platforms.

To support this effort, \$22.8 million is programmed in FY 1992 and \$17.3 million is requested in FY 1993.

Headquarters Managed Peculiar Support Equipment

This budget sub-line provides funds to replace certain in-use Peculiar Support Equipment (PSE) assets that are now only marginally effective due to obsolescence or to the unavailability of associated logistics support. Of late 1960 and early 1970 vintage, the applicable vendors no longer manufacture the PSE items or associated repair parts. Alternate sources are not available. As a consequence, a replacement item that is logistically supportable must be designed and produced. In addition, this sub-line provides for completion of the design and initial production of (1) certain PSE items that for various reasons were not funded during the production phase of the weapon systems, and (2) modification of PSE to extend its useful service life.

\$11.9 million is programmed in FY 1992 and \$12.2 million is requested in FY 1993 for this program.

Gas Turbine Compressor (GTC) Replacement

The budget includes \$16.9 million in FY 1992 and requests \$14.9 million in FY 1993 to finance the acquisition of new universal Jet Aircraft Start Units (JASU) capable of starting all Navy and Marine Corps aircraft requiring a ground start power cart. The Universal JASU will replace 30 year old air start units which are no longer supportable, and is expected to save almost \$300 million in life cycle costs over the previous units.

Avionics Support Equipment

The FY 1992 program of \$14.2 million and the \$28.6 million requested in FY 1993 will provide for the acquisition of several common avionics support equipment items: New Electronic Warfare Sweep Carts (NEWS); AN/APN-455 Radar Beacon Test Sets; Pressure/Temperature Test Sets; Common Bomb Pack/Launcher Test Sets; AN/AVN-96 Weapon Control Test Sets; Instrument Repair Test Sets; Aircraft Wiring I-Level Test and Tool Sets; and Rapid Reprogramming Terminals.

The NEWS will be an electronic warfare countermeasure test set used in organization-level maintenance support of a variety of EW equipment and will replace the AN/USM-406C Test Set. The Radar Beacon Test Set is a portable, battery powered test set which will provide rapid organization level test of the Automatic Carrier Landing System (ACLS) with greater accuracy and reliability. The new portable Pressure/Temperature Test Set is designed for both flight line and intermediate maintenance in checking performance characteristics of aircraft airspeed, altimeter, and engine pressure ratio system. It will also provide temperature simulation and pressure data required by the Standard Central Air Data Computer. The Common Bomb Pack/Launcher Test Set is an intermediate/depot tester that provides pass/fail status of uninstalled bomb racks and missile launchers. The Aircraft Weapon Control Test Set (AWN-96) is an organizational level test set for all platforms that implements the MIL-STD-1760 aircraft stores electrical interconnection system. The Instrument Repair Test Set is used for repair of aircraft instruments. It is required at selected field activities to be used on various aircraft such as SH-60 and P-3.

The Aircraft Wiring I-Level Test Set will provide intermediate maintenance activities with the capability to automatically test and repair faulty cables and harnesses, drastically reducing cable/harness mean time to repair intervals. The Aircraft Wiring I-Level Tool Set will provide intermediate maintenance activities the hard tools necessary to repair/remanufacture wiring harnesses and cables. The Rapid Reprogramming Terminal is a common, portable organizational level maintenance memory loader/verifier required to load tactical software for multiple avionics systems.

Rapid Deployment Forces/Maritime Prepositioned Ships

The \$4.0 million programmed in FY 1992 and the \$9.0 million requested in FY 1993 will procure additional Support Equipment for upgrading three Marine Amphibious Brigades. This support equipment (SE) will support aircraft configuration changes and replace/modernize outdated SE utilized in the RDP mission, with emphasis on the F/A-18D and CH-53E aircraft.

Aircraft Industrial Facilities

Funding is requested for the following categories of equipment:

	(Dollars in Millions)	
	FY 1992	FY 1993
Calibration Equipment	\$14.3	\$14.8
Contractor Facilities	22.9	15.7
Total Aircraft Industrial Facilities	\$37.2	\$30.5

Calibration Equipment

The calibration program provides the fleet with a means to ensure that Support Equipment (SE) is operational and accurate. Calibration is the process of periodically comparing the performance of items of SE to that of equipment of known and greater accuracy. This accuracy must be traceable to the National Bureau of Standards. Calibration includes any adjustments to the SE that may be required.

Calibration funds are used to procure calibration standards and ancillary equipment required to support aviation SE. Approximately 100 fleet intermediate level calibration laboratories, 30 Navy Calibration Laboratories (Depot) and five Standards Laboratories are supported through these procurements. Standards are used to initiate capability, expand capabilities, improve efficiency of production, reduce manhours and to replace obsolete equipment.

Contractor Facilities

The contractor facilities program provides for capital maintenance, modernization, improvements, emergency repairs, fire protection, and mandatory environmental and safety requirements for government-owned, contractor-operated, aircraft-producing industrial plants and for replacement/restoration of government-owned production equipment in use on Navy programs at these plants. Facilities management contracts require that the government fund capital maintenance projects as required. These projects apply to Naval Weapons Industrial Reserve Plants (NWIPs) at Bloomfield, Conn.; Dallas, Texas; and Bethpage, New York.

War Consumables

\$15.5 million is programmed in FY 1992 and \$15.2 million is requested in FY 1993 for War Consumables. The War Consumables program funds procurement of those airborne equipments which can be suspended, released, or jettisoned from aircraft. Items are bought in this account to satisfy inventory objectives which are determined by such factors as the numbers and types of using aircraft, the mission of aircraft, and attrition and pipeline requirements. The FY 1993 request includes funding for a follow-on procurement of External Fuel Tanks which provide combat aircraft with extended mission range. The FY 1992 and FY 1993 programs also will fund the procurement of common bomb racks and launchers including release mechanism upgrade kits to prevent inadvertent release of missiles during carrier arrestments.

Other Production Charges

The \$35.8 million programmed in FY 1992 and the \$83.1 million requested in FY 1993 will provide for the following:

- (a) Government-Furnished Equipment (GFE) production support which includes testing services, production data reviews, technical publications, repair of damaged or defective GFE, and procurement of Navy Stock Fund items necessary for fleet installation of technical directives (i.e., minor modification kits and other hardware changes).
- (b) Procurement of certain Navy avionics equipment for installation in Coast Guard aircraft.
- (c) Procurement of reconnaissance and other aerial cameras.
- (d) Procurement of instrumentation packages used by aircraft participating in Mobile Sea Range exercises.
- (e) Procurement of pods for the Tactical Aircrew Combat Training System (TACTS).
- (f) The FY 1993 request includes \$48.3 million for interim contractor support which is being functionally transferred from the OEM, N appropriation in this submission. This is for contractor maintenance services which are necessary to support aircraft and systems introduced into the fleet prior to the availability of Navy organic support. This is being done to more accurately reflect total acquisition costs in the procurement accounts. Of the amount transferred, \$25.4 million is for E-6A interim contractor maintenance services.

Special Support Equipment

Funding programmed in FY 1992 (\$37.9 million) and in FY 1993 (\$37.6 million) will support a classified program.

First Destination Transportation Charges

The budget account of \$6.1 million in FY 1992 and the request of \$6.0 million in FY 1993 for the movement of newly procured equipment and material from the contractor's plant to the initial point of receipt by the government. This program, previously funded in the Operation and Maintenance, Navy appropriation, has been transferred to the procurement appropriations to more accurately reflect the full cost of equipment acquisition.

**COMPARISON OF FY 1992 PROGRAM REQUIREMENTS AS REFLECTED IN FY 1992/FY 1993 BUDGET AMENDMENT
WITH FY 1992 PROGRAM REQUIREMENTS SHOWN IN FY 1993 PRESIDENT'S BUDGET**

	(In Thousands of Dollars)			
	Total Program Requirements per 1992/1993 Budget Amendment	Total Program Requirements per 1993 Budget	Increase (+) or Decrease (-)	
Combat Aircraft.....	\$ 4,096,460	\$ 4,215,904	+\$ 119,444	
Airlift Aircraft.....	-	-	-	
Trainer Aircraft.....	343,493	325,896	- 17,597	
Other Aircraft.....	165,559	-	- 165,559	
Modification of Aircraft.....	985,482	1,115,816	+ 130,334	
Aircraft Spares and Repair Parts.....	950,962	945,662	- 5,300	
Aircraft Support Equipment and Facilities.....	572,844	550,027	- 22,817	
Administrable Program.....	<u>6,800</u>	<u>6,800</u>	<u>-</u>	
TOTAL FISCAL YEAR PROGRAM	\$ 7,121,600	\$ 7,160,105	+\$ 38,505	

EXPLANATION BY BUDGET ACTIVITY

Combat Aircraft. (\$319.4 million)

Major changes in this budget activity are associated with the following Congressional actions including specific net changes of -\$299.1 million and application of contractor support services reductions of \$10.4 million:

Program	Qty	Amount	Program	Qty	Amount	Program	Qty	Amount
AV-8B		+\$ 40.0	CH-53E	-4	-\$ 116.3	SH-60F		-\$.6
EA-6B	-	.3	CH-53E Adv. Proc.	-	-\$ 22.1	E-2C	-	1.4
F-14	-	.5	AH-1W	-	.4			
F/A-18	-9	- 207.5	SH-60B	-	.6	TOTAL	-13	<u>-\$309.6*</u>

*Does not add due to rounding

Other changes include proposed rescissions of \$79.0 million and an increase of \$508.0 million for Desert Storm requirements as follows:

Program	Qty	Amount	Program	Qty	Amount
AV-8B	+6	\$230.0	AH-1W	+2	\$ 18.0
F-18	+9	243.0	SH-60B	+1	<u>17.0</u>
			TOTAL	+18	<u>+\$508.0</u>

Desert Aircraft (-\$17.6 million)

The change in this budget activity is due to the T-45 aircraft and reflects Congressional action adding \$40.0 million for procurement of an alternative engine for the T-45A and application of general Congressional reductions for contractor support services (\$.9 million). Additionally, there is a proposed reprogramming of \$16.7 million to RDT&E for development of a digital cockpit for the T-45 aircraft and a proposed rescission of \$40.0 million.

Other Aircraft (+\$165.6 million)

The reduction of \$165.6 million to this budget activity is the result of Congressional action disapproving a FY 1992 procurement of nine HH-60H aircraft.

Restitution of Aircraft (+\$130.3)

Congressional action resulted in a net increase of \$283.3 million including specific increases of \$285.3 million and general reductions of \$2.0 million for reduced contractor support services from the following program:

Program	Amount	Program	Amount	Program	Amount
H-6 Series	+\$16.0	H-53 Series	-\$.1	S-3 Series	-\$.2
EH-6 Series	-.2	H-1 Series	+ 14.7	B-6A	+ 38.2
F-14 Series	+174.9	H-2 Series	+ 7.7	Pwr Pkt Cng	-.1
				Common ECM	<u>+\$ 17.7</u>
				TOTAL	<u>+\$ 283.3</u>

Other reductions include proposed rescissions totalling \$166.0 million and \$7.7 million due to rephasing of the MH-53 Global Positioning Systems (GPS) provisions (OSIP 20-92).

Additional changes are increases of \$13.0 million to the OV-10 Series for Desert Storm requirements, \$3.6 million to P-3 Series for GPS provisions rephasing (OSIP 28-92), and \$4.2 million to the Common Avionics changes account for rephasing of GPS hardware (OSIP 71-88).

Aircraft, Stores and Repair Parts (-\$5.3 million)

The change in this budget activity results from a Congressional decrease of \$5.3 million based on anticipated savings from the establishment of the Defense Business Operations Fund.

Aircraft, Support Equipment and Facilities (-\$22.8 million)

Congressional reductions of \$21.5 million to the Common Ground Equipment (CGE) line and application of an additional \$1.3 million of Contractor Support Services (\$1.2 million from CGE and \$.1 million from Other Production Charges) account for the changes in this budget activity.

COMPARISON OF FY 1992 FINANCING AS REFLECTED IN FY 1992/FY 1993 BUDGET AMENDMENT
WITH FY 1992 FINANCING AS SHOWN IN FY 1993 PRESIDENT'S BUDGET

	Financing per 1992/1993 Budget	Financing per 1993 Budget	Increase (+) or Decrease (-)
Program Requirements (Total).....	\$ 7,121,600	\$ 7,160,105	+ \$ 38,505
Program Requirements (Service account).....	(7,114,800)	(7,153,305)	(+ 38,505)
Program Requirements (Reimbursable).....	(6,800)	(6,800)	(-)
 Less:			
Anticipated Reimbursements.....	6,800	6,800	-
Transferred from other accounts.....	-	521,000	- 521,000
 Add:			
Proposed appropriation rescission.....	-	285,000	+ 285,000
Reduction pursuant to P.L. 102-172.....	-	14,615	+ 14,615
Transferred to other accounts.....	-	16,700	+ 16,700
Appropriation.....	\$ 7,114,800	\$ 6,948,620	-\$ 166,180

EXPLANATION OF CHANGES IN FINANCING

The change in program requirements is the result of Congressional reductions of \$166,180,000 including distribution of general Congressional reductions of \$14,615,000 and \$5,300,000 and financing changes which include a proposed DD1415 Reprogramming Action transferring \$16,700,000 out of the appropriation, an anticipated rescission amount of \$285,000,000, and \$521,000,000 transferred from other accounts for Desert Storm requirements.

COMPARISON OF FY 1991 PROGRAM REQUIREMENTS AS REFLECTED IN FY 1992/FY 1993 BUDGET AMENDMENT
WITH FY 1991 PROGRAM REQUIREMENTS SHOWN IN FY 1993 PRESIDENT'S BUDGET

	Total Program Requirements per <u>1992/1993 Budget Amendment</u>	Total Program Requirements per <u>1993 Budget</u>	(In Thousands of Dollars)	Increase (+) or Decrease (-)
Combat Aircraft.....	\$ 4,613,935	\$ 4,470,274		-\$ 143,661
Airlift Aircraft.....	-	-		-
Trainer Aircraft.....	159,154	157,775		- 1,379
Other Aircraft.....	6,000	6,054		+ 54
Modification of Aircraft.....	2,172,941	2,272,664		+ 99,723
Aircraft Spares and Repair Parts.....	1,110,104	1,208,794		+ 98,690
Aircraft Support Equipment and Facilities.....	533,001	475,430		- 57,571
Reimbursable Program.....	<u>6,600</u>	<u>50,533</u>		<u>+\$ 43,933</u>
TOTAL FISCAL YEAR PROGRAM.....	\$ 8,601,735	\$ 8,641,524		+\$ 39,789

EXPLANATION BY BUDGET ACTIVITY

Combat Aircraft (-\$143.7 million)

Increases totalling \$48.1 million were accomplished through reprogramming and include \$24.7 million for advance procurement/longlead items for several aircraft programs subsumed as follows: the F/A-18 (\$8.8 million) for a radar upgrade; the SH-60B (\$6.4 million) and the C/MH-53E (\$9.3 million) for higher-than-anticipated termination liability funding requirements, and the E-2C (\$2 million) for minor changes in requirements; \$10.2 million to the AV-8B program for radar recurring cost requirements; \$9.1 million to the F-14 program primarily to reimburse the Iranian Asset Account for one aircraft diverted to the Navy inventory; \$3.8 million to the E-2C program to decommit the aircrafts contract; and \$.3 million to the EA-6B program for minor pricing changes.

Decreases totalling \$36.2 million include the following: \$9.9 million from the F/A-18 program due to reduced procurement of ancillary equipment; \$24.5 million from the SH-60B program after recalculating support requirements and repricing; and \$1.8 million from the SH-60F due to repricing various components, equipments and support elements.

Other changes include an increase of \$9.4 million from the Desert Storm supplemental for SH-60B Forward Looking Infrared Radar equipment and \$165.0 million of V-22 advance procurement funds which were transferred out of the appropriation by Congressional action.

Transier Aircraft (-\$1.4 million)

The decrease in this budget activity reflects reduced T-45TS support requirements.

Other Aircraft (+\$1 million)

The \$.1 million increase in this budget activity is due to payment of a charge to an account cancelled by P.L. 101-510 and for which currently available funds had to be used.

Modernization of Aircraft (+\$22.7 million)

Increases resulting from the Desert Storm supplemental in this budget activity total \$40.5 million for the following programs: H-2 Series (\$9.2 million); F-18 Series (\$1.8 million); H-1 Series (\$2.2 million); EA-6B Series (\$.2 million); S-3 Series (\$.3 million); F-16SC Series (\$1.8 million); C/KC-130 Series (\$11.5 million); Common Avionics Changes (\$4.1 million); F-3 Series (\$7.7 million); H-3 Series (\$1.4 million); and the EP-3 Series (\$.3 million). These funds were provided to replace funds diverted for urgent Desert Storm shield/Desert storm requirements.

Below threshold reprogramming increases totalling \$110.9 million include the following: \$.1 million to the A-3 Series for changes under the Omnibus R&M Improvements (OSIP 18-90); \$10.9 million to the A-6 Series for cost increases on several modifications and acceleration of the J-52-P-8 Safety and Readiness Improvement (OSIP 126-87); \$.3 million for EA-6 Series PODs for seabased EW Squadrons (OSIP 31-91); \$.1 million each for A-7 Series Omnibus R&M Improvements (OSIP 112-87) and for F-4 Series and RF-4 Series Follow-on Structural Fatigue modifications (OSIP 18-91 and OSIP 39-85 respectively); \$.9 million net increase to the F-14 Series for several changes primarily to accelerate and layout JTFB terminals (OSIP 3-91) and addition of a SCADC requirement (OSIP 34-91); \$.9 million to the Adversary Series for continuation of the F-16N Structural Upgrade (OSIP 32-90); \$.2 million for additional requirements of the S-3A to ES-3A modification (OSIP 79-88); \$1.3 million for the OV-10 Series Block Upgrade I (OSIP 61-94) to bring six Air Force OV-10As to Marine Corps OV-100 configuration; \$.3 million to the H-46 Series for Block Upgrade (OSIP 104-87) rephasing; \$.5 million to the H-53 Series for various changes; \$10.8 million to the H-1 Series primarily for five AH-1T/W Night Targeting Systems (OSIP 8-90) prototypes; \$.67 million to the EP-3 Series for increased requirements under the CINCOP program (OSIP 48-81) and addition of a Signal Exploit Upgrade (OSIP 28-91); \$.26.7 million to the E-2 Series reflecting disapproval of the E-2 mod line as a source in the Omnibus reprogramming (\$28.5 million), offset by a minor decrease for reprocicing of the Block Upgrade I (OSIP 74-88) and various other changes; \$.68 million to the F-16SC Series primarily for increased ALQ-167 kits and support (OSIP 119-83); \$.82 million to the Cargo and Transport Aircraft account for several safety of flight changes to the C-2; \$.1 million to the B-6A Series for minor changes to the Corrections to Deficiencies (OSIP 13-90); \$.1.6 million to Power Plant Changes for the F402 engine and a fire hazard elimination modification; and \$.5.3 million for Common Avionics Changes primarily for acceleration of the Digital Air Data Converter (OSIP 34-84).

offsetting the above by \$51.7 million were the following decreases: \$.4 million from the A-4 Series based on reduced cost of the TA-4-J-52-P-6 Safety and Readiness Improvement (OSIP 93-86); \$.6 million from the AV-8 Series due to revised requirements and pricing on the S, R&M modification (OSIP 14-84); \$.9 million from the P-18 series due to reduced requirements for Correction of Discrepancies (OSIP 11-84); a decrease of \$.6 million in the H-3 SLEP Block Upgrade (OSIP 46-83) for reduced support; a net decrease of \$.9 million from the P-3 Series based on revised requirements of the UHF/VHF Communications Update and the Update III partially offset by an increase (\$.4 million) in Drug Operations (OSIP 30-89); \$.3 million from the S-3 Series based on reduced cost of the Block Upgrade (OSIP 109-87) and the MK-50 Compatibility (OSIP 13-89); \$.3.5 million from the Trainer Aircraft account for savings on the TA-4F/J Miniature Air Data Computer (OSIP 30-90) and the TA-4-J-52-P-6 R&M Improvement (OSIP 12-91); \$.11.4 million from the C/KC-130 Series reflecting reduced requirements for the Defensive Electronics Countermeasures (OSIP 34-90); and \$.15.9 million from the Common ECM Equipment line due to rephasing of AN/ALR-67 Hardware (OSIP 114-85) requirements.

Aircraft, Spares and Repair Parts (+\$98.7 million)

The increase of \$98.7 million includes the addition of \$.85.0 million for Desert Storm requirements (\$16.0 million in initial spares for spare engines and the balance of \$.69.0 million in replenishment spares). Other changes include an additional increase to replenishment spares of \$.51.1 million, \$.37.4 million of which was realigned from initial spares with the balance of \$.13.7 million being transferred into this budget activity. The increase was attributable to increased outfitting requirements during the year.

Aircraft, Support Equipment and Facilities (-\$57.6 million)

Changes in this budget activity are a net decrease of \$.57.6 million. This results from a proposed rescission of \$.83.1 million and other reprogramming reductions totalling \$.25.4 million due largely to delays in the Consolidated Automated Support System in the Common Ground Equipment account; a \$.1.1 million decrease to the Contractor Facilities subaccount in the Aircraft Industrial Facilities line; \$.7 million from War Consumables due to repricing Aerial Refueling Stores; and \$.1.5 million from the First Destination Transportation account resulting from fewer-than-anticipated transportation costs.

The decreases are partially offset by an increase of \$.16.5 million from the Desert Storm supplemental for mobile shelters, aerial cameras, and other support equipment. Other increases include \$.3.4 million for Common Avionics decentralization efforts, \$.1.7 million for the Engine Blade/Vane Project and \$.2.6 million for A-6 Production and Integrated Logistics Support.

Reimbursable Program (+\$43.9 million)

The increase in the reimbursable program reflects actual orders received of \$.50.5 million which were \$.43.9 million more than the originally anticipated \$.6.6 million. A Foreign Military Sale to Italy of 2 TAV-8B aircraft from inventory produced an asset which was used to replace-in-kind two aircraft.

COMPARISON OF FY 1991 FINANCING AS REFLECTED IN FY 1992/1993 BUDGET AMENDMENT
WITH FY 1991 FINANCING SHOWN IN FY 1993 PRESIDENT'S BUDGET

	Financing per 1992/1993 Budget Amendment	Financing per 1993 Budget	Increase (+) or Decrease (-)
Program Requirements (Total).....	\$ 8,601,735	\$ 8,641,524	+\$ 39,789
Program Requirements (Service account).....	(8,595,135)	(8,590,991)	(- 4,144)
Program Requirements (Reimbursable).....	(6,600)	(50,533)	(+ 43,933)
 Less: Anticipated Reimbursements.....	6,600	50,533	- 43,933
Transferred from other accounts.....	851,600	1,035,540	- 183,940
 Add: Unobligated balance available to finance subsequent year budget plans.....	15,116	-	- 15,116
Transferred to other accounts.....	43,400	246,600	+ 203,200
Appropriation.....		\$ 7,802,051	-

EXPLANATION OF CHANGES IN FINANCING

The increase in program requirements of \$39,789,000 is due primarily to the increase in the reimbursable account (\$43,933,000) for a Foreign Military Sale/Replacement-in-Kind which is partially offset by a slight decrease (\$4,144,000) in the direct program accounts.

This slight decrease reflects application of the \$15,116,000 anticipated unobligated balance and an additional \$183,940,000 transferred from other accounts (\$151,400,000 for Desert Storm by P.L. 102-28 from the Defense Cooperation Fund and \$32,540,000 of various other actions) which were offset by the increase of \$203,200,000 transferred out of the appropriation (\$165,000,000 to Research, Development, Test and Evaluation, Navy for V-22 and an additional \$38,200,000 above the \$43,400,000 requested last year to be transferred to the Shipbuilding and Conversion, Navy appropriation).

STATUS OF AIRCRAFT MODIFICATION PROGRAMS
 FY 1992 MODIFICATION OF AIRCRAFT
 PROGRAMS AS OF 30 NOVEMBER 1991
 (THOUSANDS OF DOLLARS)

PROGRAM	APPROPRIATED	REPROGRAMMING	PROGRAM VALUE	TOTAL OBLIGATIONS		TOTAL EXPENDITURES
				TOTAL	OBLIGATIONS	
A-4 SERIES	4,353	0	4,353	0	0	0
A-6 SERIES	21,485	(15)	21,470	0	0	0
EA-6 SERIES	71,654	(199)	71,455	0	0	0
AV-8 SERIES	19,791	0	19,791	0	0	0
F-14 SERIES	228,562	(143,149)	85,413	0	0	0
ADVERSARY	3,874	0	3,874	0	0	0
ES-3 SERIES	5,562	(15)	5,547	0	0	0
OV-10 SERIES	17,176	0	17,176	0	0	0
F-18 SERIES	28,431	0	28,431	0	0	0
H-46 SERIES	68,064	0	68,064	0	0	0
H-53 SERIES	50,216	(7,868)	42,348	0	0	0
SH-60 SERIES	29,007	0	29,007	0	0	0
VH-60 SERIES	45	0	45	0	0	0
H-1 SERIES	133,201	(329)	132,872	21	21	21
H-2 SERIES	116,202	(8,301)	107,901	2,100	2,100	0
H-3 SERIES	39,513	(110)	39,403	0	0	0
EP-3 SERIES	33,486	(15,051)	18,435	0	0	0
P-3 SERIES	14,868	3,527	18,395	0	0	0
S-3 SERIES	77,071	(214)	76,857	0	0	0
E-2 SERIES	57,398	0	57,398	0	0	0
TRAINER A/C	10,645	0	10,645	0	0	0
C-130/KC-130 SERIES	16,834	0	16,834	0	0	0
FEWSG	17,230	0	17,230	0	0	0
CARGO & TRANSPORT A/C	1,753	0	1,753	0	0	0
E-6 SERIES	57,823	(54)	57,769	0	0	0
VARIOUS	100	0	100	0	0	0
POWER PLANT CHANGES	27,434	(76)	27,358	0	0	0
MISC. SAFETY CHANGES	162	0	162	0	0	0
COMMON ECM EQUIPMENT	119,414	(282)	119,132	0	0	0
COMMON AVIONICS CHANGES	12,428	4,170	16,598	0	0	0
TOTAL B.A. 5	1,283,782	(167,966)	1,115,816	2,121	0	0

STATUS OF AIRCRAFT MODIFICATION PROGRAMS
 FY 1991 MODIFICATION OF AIRCRAFT
 PROGRAMS AS OF 30 NOVEMBER 1991
 (THOUSANDS OF DOLLARS)

PROGRAM	APPROPRIATED	REPROGRAMMING	TOTAL		TOTAL EXPENDITURES
			PROGRAM VALUE	OBLIGATIONS	
A-3 SERIES	102	0	102	0	0
A-4 SERIES	7,407	(1,704)	5,703	3,973	219
A-6 SERIES	99,093	9,150	108,243	94,734	8,923
EA-6 SERIES	50,634	1,132	51,766	24,862	4,597
A-7 SERIES	102	0	102	0	0
AV-8 SERIES	401	2,587	2,988	266	25
F-4 SERIES	102	0	102	0	0
RF-4 SERIES	102	0	102	0	0
F-14 SERIES	72,388	9,812	82,200	37,713	1,327
F-5 SERIES	102	9,707	9,809	2,645	393
OV-10 SERIES	1,340	1,089	2,429	416	31
F-18 SERIES	19,568	4,011	23,579	20,879	242
H-46 SERIES	39,492	6,668	46,160	30,913	3,032
H-53 SERIES	35,694	(101)	35,593	26,271	1,799
SH-60 SERIES	45,079	(651)	44,428	15,943	409
H-1 SERIES	78,902	(14,440)	64,462	31,266	4,585
H-2 SERIES	8,932	9,200	18,132	16,449	2,096
H-3 SERIES	1,343	6,342	7,685	3,162	536
EP-3 SERIES	22,423	9,794	32,217	29,272	8,982
P-3 SERIES	179,883	(2,284)	177,599	162,003	24,452
S-3 SERIES	112,939	1,401	114,340	93,864	17,018
ES-3	5,163	2,494	7,657	6,200	1,369
E-2 SERIES	119,467	6,613	126,080	75,431	8,178
TRAINER A/C	23,404	(8,481)	14,923	10,281	318
C-130/KC-130 SERIES	7,952	(2,334)	5,618	3,652	1,086
FEWSG	5,464	9,828	15,292	14,065	4,828
CARGO & TRANSPORT A/C	6,373	1,732	8,105	0	0
E-6A	8,185	7,140	15,325	14,443	2,327
POWER PLANT CHANGES	11,606	6,280	17,886	13,130	2,661
MISC. SAFETY CHANGES	27	0	27	0	0
COMMON ECM EQUIPMENT	102,798	(560)	102,238	43,552	3,947
COMMON AVIONICS CHANGES	3,052	9,478	12,530	11,539	341
TOTAL B.A. 5	1,069,519	83,903	1,153,422	786,924	103,721

STATUS OF AIRCRAFT MODIFICATION PROGRAMS
 FY 1990 MODIFICATION OF AIRCRAFT
 PROGRAMS AS OF 30 NOVEMBER 1991
 (THOUSANDS OF DOLLARS)

PROGRAM	APPROPRIATED	REPROGRAMMING	TOTAL PROGRAM VALUE		TOTAL OBLIGATIONS	TOTAL EXPENDITURES
			100	(100)		
A-3 SERIES	100	0	0	4,198	0	0
A-4 SERIES	6,339	(2,140)	4,199	4,198	529	529
A-6 SERIES	111,387	(2,060)	109,327	107,106	30,640	30,640
EA-6 SERIES	26,033	2,261	28,294	27,583	11,516	11,516
A-7 SERIES	62	(47)	15	15	2	2
AV-8 SERIES	100	16	116	15	0	0
F-4 SERIES	98	(98)	0	0	0	0
RF-4 SERIES	100	(100)	0	0	0	0
F-14 SERIES	16,038	(1,414)	14,624	14,533	1,855	1,855
F-5 SERIES	100	145	245	177	97	97
ES-3 SERIES	107,966	3,061	111,027	108,623	58,144	58,144
OV-10 SERIES	10,858	8,380	19,238	12,318	1,461	1,461
F-18 SERIES	4,717	1,769	6,486	5,023	608	608
H-46 SERIES	3,898	9,656	13,554	12,655	2,405	2,405
H-53 SERIES	29,721	(8,112)	21,609	20,940	7,544	7,544
SH-60 SERIES	599	462	1,061	845	252	252
VH-60 SERIES	5,852	(3,500)	2,352	1,843	1,195	1,195
H-1 SERIES	48,115	(223)	47,892	46,383	30,911	30,911
H-2 SERIES	24,071	7,837	31,908	28,622	8,029	8,029
H-3 SERIES	10,333	(2,501)	7,832	7,071	2,405	2,405
EP-3 SERIES	13,752	1,968	15,720	15,281	13,718	13,718
P-3 SERIES	30,725	6,616	37,341	37,279	23,593	23,593
S-3 SERIES	81,135	(794)	80,341	80,274	37,787	37,787
E-2 SERIES	71,720	8,971	80,691	78,964	48,342	48,342
TRAINER A/C	2,317	918	3,228	3,149	303	303
CARGO & TRANSPORT A/C	1,552	440	1,992	1,814	181	181
E-6A SERIES	7,512	1,259	8,771	8,693	5,154	5,154
C-130/KC-130 SERIES	3,129	4,672	7,801	7,431	3,800	3,800
FEJSG	269	2,475	2,744	2,024	1,614	1,614
POWER PLANT CHANGES	5,959	805	6,764	6,640	3,275	3,275
MISC. SAFETY CHANGES	999	4,685	5,684	5,592	3,322	3,322
COMMON ECM EQUIPMENT	46,781	(3,891)	42,890	39,544	27,569	27,569
COMMON AVIONICS CHANGES	1,427	9,466	10,893	8,382	1,105	1,105
MODIFICATION INSTALLATION	918,700	(126,877)	791,823	730,469	271,275	271,275
TOTAL B.A. 5	1,592,457	(75,995)	1,516,462	1,423,486	598,631	598,631